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# Effectiveness of the Thai governmental policy on rural community development: A critical appraisal

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**Effectiveness of the Thai governmental policy on rural  
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**Panmunin, Wanna, Ph.D.**

**Iowa State University, 1988**

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**Effectiveness of the Thai governmental policy on rural  
community development: A critical appraisal**

**by**

**Wanna Panmunin**

**A Dissertation Submitted to the  
Graduate Faculty in Partial Fulfillment of the  
Requirements for the Degree of  
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## TABLE OF CONTENTS

	Page
DEDICATION	i.v
CHAPTER I. INTRODUCTION	1
Statement of the Problem	3
The Scope of the Study	4
Significance of the Study	5
Organization of the Study	6
CHAPTER II. BACKGROUND OF THE RESEARCH PROBLEM	7
Thailand: An Overview	7
The Virtuous and Prosperous Land (VPL) Program	9
CHAPTER III. CONCEPTUAL FRAMEWORK	15
The Actor	20
The Situation	27
The VPL Program as Nonsocial Object	27
Change Agents and Buddhist Monks as Social Objects	30
Orientation to the Situation	32
Mind purification	32
Abstinence from vice	34
Perception of the program	35
Attitudes toward village activities	37
Goal	39
CHAPTER IV. METHODS	43
Data and Data Collection	43
Sampling Procedures	43
Presentation of Data	45
Operationalization of Variables	47
Control variables	51
Statistical Techniques	52
Chi-square ( $X^2$ )	53
Pearson correlations	54
Path analysis	55

	Page
CHAPTER V. ANALYSIS AND FINDINGS	61
Test of Hypotheses	61
Evaluation of Hypotheses: A Cross-tabulation Approach	65
Participation in the VPL Program and Orientation to the Situation (H1)	67
Participation in the VPL Program and Participation in Village Activities (Hypotheses H2-H4)	72
Orientation to Situation and Goal (Hypothesis H5)	77
Zero-Order Correlations	85
Path Analysis	87
Model 1: The respondents' model	92
Model 2: Models for participants and nonparticipants	94
CHAPTER VI. DISCUSSION AND CONCLUSION	97
Effectiveness of the VPL Program	97
Needs assessment	102
The implementation of the program	104
A Critique of the NRC Proposed Research Design	106
The research design	106
Sampling procedures and the sample	111
Measurement of variables	116
Data collection	122
Policy Implications	130
Limitations and Suggestions for Future Research	135
General Conclusion	140
REFERENCES	142
ACKNOWLEDGEMENTS	156
APPENDIX A. QUESTIONNAIRE	157
APPENDIX B. CORRELATION MATRICES FOR THE PATH MODELS	166

## DEDICATION

I would like to dedicate this dissertation to my parents: my father, the late Thongyoo Panmunin, who was always proud of his daughter, and my mother, Boonruan Sommal, who endured her first, and hopefully last, Iowa winter, patiently waiting for her daughter to finish her dissertation.

This dissertation is also dedicated to the Thai villagers who kindly participated in this study. I have learned much from your kindness and patience.

## CHAPTER I. INTRODUCTION

In spite of the immense industrial development that has taken place over the past two-and-a half decades in Thailand, a substantial percentage of the kingdom's economy and most of its social life are still influenced by the rural areas. Agriculture, especially rice cultivation, is the main occupation of the majority of the residents of the countryside, and it represents one of the most important sources of foreign exchange. Similarly, the Buddhist religion, which is well rooted in the hinterland, permeates Thai rural and urban life. Even though rural inhabitants make significant contributions to overall national economic development, a great many of the rural people live in poverty.

In an effort to correct the existing imbalance, the Thai government has launched a series of development programs. But due to resource limitations, none of the past programs have been designed exclusively for the rural poor; instead, they have mostly taken the form of five-year national development plans. The first three plans (1962-1966, 1967-1971, 1972-1976) aimed at increasing national per capita income through industrial expansion with the view that the spill-over effect would benefit rural inhabitants. Like similar patterns elsewhere in the developing world, the

second objective (spill-over effect) never materialized. The fourth and fifth development plans (1977-1981, 1982-1986) had as their goal the eradication of absolute poverty especially in those regions considered to be depressed areas (i.e., regions with extremely low per capita income, limited natural resources, and low agricultural output per capita) (Government of Thailand, 1982). The most recent poverty eradication program, which was targeted to 246 depressed districts, aimed to increase agricultural output in those depressed rural areas, expand basic health services by providing hospitals in all target districts and health centers in all target villages, and implement a rural job creation scheme (Government of Thailand, 1982:18).

In July, 1985, the government instituted the "Virtuous and Prosperous Land" (VPL) program as a supplement to the on-going poverty eradication program (National Research Council of Thailand, 1986a). The goal of the new program is to provide rural adults with information and knowledge about the importance of village development and about how they can participate in development activities. The main tenet of the program is the application of the Buddhist ethic as a mechanism for persuasion and grassroots participation in community development. This was the first time Buddhist doctrine has been applied in Thailand as a means to community development. The fundamental assumption of the program

is that, in order to participate in village development activities, people need to have the "right" mind. People with a "right" or "purified" mind are more likely to participate in village development activities to better the life of everyone in the village. The VPL program also promotes mind purification of the rural people, encourages abstinence from vice, develops favorable perceptions of the programs, and fosters positive attitudes toward and participation in village improvement activities. It is assumed that these activities will lead to the betterment of the community as a whole.

#### Statement of the Problem

The VPL program is the application of an abstract concept, Buddhist doctrine, for the purpose of achieving a concrete goal, peoples' participation in village development. Because it is a recent program of the central government, there has not yet been an assessment of the program's effects. Rossi and Freeman (1982) noted that effective programs are often the ones that produce the most impact on the most targets. The impact of the VPL program depends on its ability to reach the state of mind purification of the people which in turn will increase their abstinence from vice, its ability to promote favorable perceptions of the program and positive attitudes toward village improvement activities among rural people, and its effectiveness in the

transformation of inputs into outputs. Causal relations between inputs and outputs are also needed for any program that operates on people as raw materials (Hasenfeld, 1983). This research, therefore, will be guided by the following questions:

- (1) To what extent has the VPL program effected people's mind purification, their abstinence from vice, their perception of the program and their attitudes toward village activities?
- (2) To what extent has the program produced concrete results, such as actual participation in village improvement activities?

#### The Scope of the Study

This study compares participants and nonparticipants in the VPL program; an assessment of program effectiveness is at issue. Cross-sectional data, collected by the Office of The National Research Council of Thailand (NRC) during May-July, 1986, are examined. The main goal of that study was to examine the extent to which the program objectives were accomplished. In this research, data generated by the NRC on the impact of the VPL program on villagers' mind purification, their abstinence from vice, their perceptions of the program, their attitudes toward village activities, and their actual participation in village improvement activities will be analyzed and the proposed research design

developed by the NRC will be critiqued. The critique will include discussion of the sampling technique, instrument construction, and methods of data collection.

#### Significance of the study

This project provides a unique perspective on the study of community development. The traditional western approach to community development, which defines community as shared institutions and values (Warren, 1972), is accepted, but the study is unique in that it focuses on the use of local religion (Buddhism) as a means to achieve development. Community development has been viewed as an outcome of the mobilization of internal/external tangible resources, local leadership, and cultural borrowing (Clinnard, 1970). The application of intangible resource such as local religion as a means to achieve community development provides community theorists and practitioners opportunities to investigate a traditional approach of rural community development in a developing country.

The study also critiques a participatory approach for policy improvement in a developing country. Previous attempts by the government of Thailand to help improve the standard of living in rural areas have yielded mixed results. One reason for the current state of affairs can be attributed to the usual top-down approach to community development. In this project, the grassroots participative



approach to community development has been used as an alternative to the top-down approach. The grassroots approach is built on the assumption that the involvement of local leaders, such as Buddhist monks as well as local citizens, will not only lead the people to inculcate the spirit of self-help, diligence, and cooperation, but will also set the stage for emulation by other developing nations. Finally, the study provides an opportunity to critique the methods and data collection used by the National Research Council of Thailand.

#### Organization of the study

Five chapters remain in this dissertation. Chapter II presents background information on the VPL program. Chapter III deals with the conceptualization of the concepts used in the study and in the formulation of hypotheses. Explanations of the presentation of the data and operational measures used to test the hypotheses are presented in Chapter IV. Data and general findings of the study constitute Chapter V. Chapter VI includes discussion and a critique of the study design, as well as policy implications and suggestions for further inquiry.

## CHAPTER II. BACKGROUND OF THE RESEARCH PROBLEM

This chapter is divided into two sections. An introduction to Thailand is provided first. Then the background of the Virtuous and Prosperous Land (VPL) program is presented.

### Thailand: An Overview

Thailand is situated in the Indochinese Peninsula between Burma on the west and north, Laos on the north and east, Cambodia (now Kampuchea) on the east, and Malaysia on the south (see Figure 1). Thailand's land area is 198,000 square miles (512,820 square kilometers), making it three-fourths the size of the state of Texas in the United States (Government of Thailand, 1968; Bunge, 1981). The topography of Thailand is divided into four national regions: Northern and Western Mountain Region, North Eastern Khorat Plateau, Central Lowland Region, and the Southern Peninsula Region. The capital city is Bangkok.

The population of Thailand was 50,580,000 in 1980 and is projected to be 66 million by the year 2000. The annual growth rate of the population was 2.1 percent from 1980-through 1985, and is expected to decline to 1.6 percent during the period 1995-2000 (United Nations, 1984). The population density averaged 177 per square mile in 1970. However, population is distributed unevenly with the highest

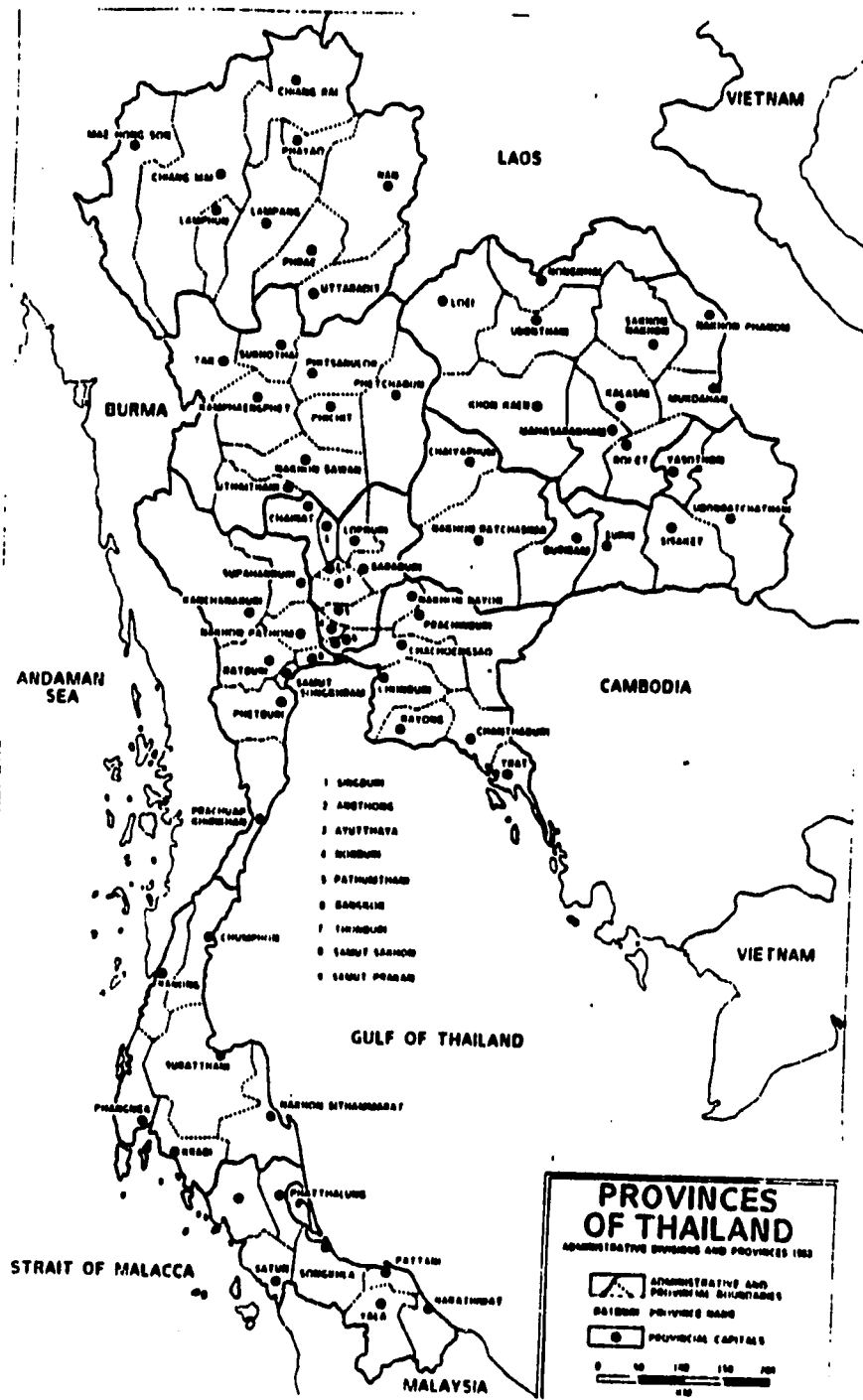


Figure 1. Map of Thailand

concentration in the Central Lowland Region, especially in Bangkok (Bunge, 1981:58). More than 70 percent of the population live in rural areas (Keyes, 1987).

The Thai people have had a written language for 700 years, and a high premium is placed on literacy. Approximately 83 percent of the Thai people can read and write (Keyes, 1987). English, which has been adopted as the second language, is widely understood by officials and in commercial circles. Buddhism is the state religion professed by about 95 percent of the population (Keyes, 1987), according to the 1980 census. The government is a constitutional monarchy, with His Majesty the King exercising nominal power. The Prime Minister, as the head of the Council of Ministers, takes actual responsibility for centralized public affairs of the country. Thailand has never experienced colonial rule (Henderson et al., 1971).

#### The Virtuous and Prosperous Land (VPL) Program

The idea of "Virtuous and Prosperous Land" (VPL) was introduced to Thailand in 1976 by a group of Thai governmental officials who had participated in a special seminar on community development in South Korea (NRC, 1986a). At that time, the South Korean government had started the "Sae Ma Ull Undong" (the New Village Movement) which applied three principles to mobilize rural people: the spirit of diligence, the spirit of cooperation, and the spirit of

self-help. Rev. Dr. Kim Soll of South Korea borrowed the self-help method which was developed in 1970 from a Thai provincial school teacher named Kru Tau Na Lumpang (NRC, 1986a). The self-help action of Kru Tau included the strategies of using groups of villagers to take turns helping each other during the harvest season. The action also included encouraging people to recognize their own problems and to solve them by using available local resources with technical advice from the government.

The New Village Movement of the South Korean Government was successful in stimulating a spirit of self-help. The village development programs under the movement paid particular attention to the villages where male adults spent most of their time gambling and left the responsibility of improving community to the government. For these villages, training programs were offered to encourage the spirit of diligence with the aim of reducing gambling among rural male adults and to stimulate them to participate in development programs. Within a period of six years (1971-1976), the program showed some success in increasing rural incomes and improving rural standards of living. This success in rural development also contributed to the overall socioeconomic development of the nation (NRC, 1986a).

Instead of a wholesale transfer of the Korean rural community development strategy to Thailand, a group of

government officials adopted those aspects of the Buddhist ethic that call for a spirit of diligence, cooperation, and self-help. The rationale was that the Buddhist doctrine is embedded in the customs, attitudes, traditions, and daily life of the Thai people. However, the doctrine had not yet been fully applied to the goal of community development. The group then developed the idea, and called it the "Virtuous and Prosperous Land" (VPL) program. This program places emphasis on community self-help action by encouraging people to identify problems in their communities and to solve them by mobilizing local resources through coordination and cooperation. Most importantly, the VPL program encourages rural people to follow the Lord Buddha's doctrine strictly in order to abstain from vice.

The VPL program was first practiced in a village in Ubonratchathani province in the northeastern region. The program was later extended to Loei province and then Phitsanulok. During 1979-1980, the VPL method was reported as "so successful in encouraging people to participate in village improvement activities that it was adopted by other governmental officials as a developmental guideline across the country" (NRC, 1986a:4). During 1981-1982, the pioneer group, accompanied by teachers from provincial teaching colleges and other governmental community agents involved in the VPL program, put forth an effort to make the VPL a

national program. The group realized that the VPL would not be a nationwide program unless there was both central government and local government involvement. As Leonard (1982) indicated, the prerequisite for rural development is a strong system of local organizations together with effective links to compatible national agencies which can support them. According to him, for any intervention to widely benefit the rural poor, the program needs to be given specificity; national agencies and local organizations must be selected as implementors, and linkages must be created between them.

In 1984, the Minister of the Office of the Prime Minister visited a village under the VPL program in Loel province and observed the program. In preparation for the celebration of His Majesty King Bhumibol's 60th birthday scheduled for 1987, the central government adopted the VPL as a national program. Committees for promotion, coordination, and distribution of the VPL programs were appointed in July of 1985. The VPL, as a national program, emphasized development of the mind by means of Buddhist Doctrine, community development by means of democracy, and economic development by means of cooperatives. The operating procedures of the VPL program (NRC, 1986a) included a national conference for governmental officials of all ranks to understand the principle of the VPL. Government

officials were requested to practice Buddhist doctrines as good examples for the people. Officials were to meet with rural people at the community and village level to improve their understanding of the VPL. At these meetings, people were encouraged to participate in the program. Local organizations, such as village committees and sub-district councils, were encouraged to be leaders in the process of mind purification and in village improvement activities. Villagers were encouraged to adopt Buddhist doctrines as the major mechanism for community development, especially at the stage of mind purification. Private organizations were encouraged to aid rural community development by providing experts, finances, and facilities. Finally, coordination of planning and resource utilization among governmental agencies, private sectors, and rural groups was encouraged. The involvement of local organizations and the voluntarily participation of rural people in village improvement activities were also strongly encouraged. The VPL program assumed that in mobilizing government, private, and community resources in a spirit of self-help and cooperation, there would be a general increase in popular participation in other activities, leading to overall community development.

The VPL program included two major activities. First, the activities for mind purification included an invitation



of Buddhist monks to preach Buddhist doctrine to villagers on merit days (a full moon day and a half moon day) and to encourage villagers to abstain from vice. Second, the village improvement program included encouraging rural people to join in activities such as making baked clay containers for the storage of clean drinking water for everyone in the village; making house number plates and road signs to temples and to governmental offices in the village; making trash burners and fertilizer; building water closets, fences, village newspaper stands, village centers, dams for irrigation purpose, and inter-village roads; repairing and maintaining village properties such as ponds and roads; establishing village cooperative stores; saving funds for agricultural purposes; and establishing circulating funds in such areas as medicine.

The VPL program, up to this point, is an attempt to transform an abstract ideology into a concrete program. The success of the program therefore relies on coordination and cooperation among the government, rural people, and other experts. At this moment there are about 2,500 villages active in the VPL program.

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### CHAPTER III. CONCEPTUAL FRAMEWORK

It is generally believed in social science circles that all scientific inquiry should derive from theory, and that it is only through the delineation of a theoretical perspective that one can establish the frame of reference within which an investigation is conducted. This section draws on social action theory to establish the theoretical linkages among the main concepts used in the study.

Parsons's (1968) social action theory suggested that there are several factors that might be helpful in explaining Thai rural villagers' participation in social development activities. The strong influence of Weber and Thomas can be seen in Parsons's contributions to the subject matter of social action theory (Timasheff and Theodorson, 1976). It is a basic sociological premise that an individual's behavior is influenced by the social situation in which it occurs. In his pioneering work on social action, Weber (1947) suggested that sociology must understand social phenomena on two levels, namely at the level of meaning to the actors themselves and at the level of collective action among groupings of actors. To Weber, therefore, there were two realities, that of the subjective meanings of actions and that of the emergent regularities of collective action.

Thomas (1923) elaborated further on Weber's notion of an individual's action. He pointed out three interrelated

elements that determine a person's action: objective conditions, existing attitudes, and an actor's definition of the situation in which he/she is engaged. Among the three, the actor's definition of the situation was thought to be the most important element. Thomas (1923:50) explained the individual's definition of the situation:

Preliminary to any self-determined act of behavior, there is always a stage of examination and deliberation which we may call the definition of the situation. Not only are concrete acts dependent on the definition of the situation but also a whole life policy and the personality of the individual himself follow from a series of such definitions.

This indicates that an individual's behavior can in part be explained by the individual's own definition and interpretation of the situation.

In Parsons's theory of action, the point of reference of all terms was the action of an individual actor or of a collectivity of actors. According to Parsons, social action is voluntaristic action involving these basic elements: actors are individual persons; actors are viewed as goal seeking; actors are also in possession of alternative means to achieve the goal; actors are confronted with a variety of situational conditions that influence the selection of goals and norms; and actors are seen to be governed by values, norms, and ideas that influence what is considered a goal and what means are selected to achieve it (Turner, 1982). Thus, "action involves actors making subjective decisions

about the means to achieve goals, all of which are constrained by ideas and situational conditions" (Turner, 1982:38). According to Parsons, the frame of reference of action involved an actor, a situation, and the orientation of the actor to the situation. The focus of his theory was the actor's orientation (a concept similar to Thomas's "definition of the situation") (Timasheff and Theodorson, 1976).

In Thailand, individual villagers voluntarily decide to participate in social development programs and activities. Their voluntary participation is within a specific social context, which is useful for effecting social change among villagers, communities, and society. Such behavior is consistent with Parsons' (1968) notion of individual actors striving to achieve individual goals within biological, cultural, and environmental (ecological) constraints. Within these given constraints, actors strive to achieve goals at least cost to themselves. The cumulative effect of these individual actions is social change.

Parsons' notion of a social system may also be used to analyze the voluntary social action process. For Parsons (1968), a social system is composed of subsystems which meet the requisite needs of a system and operate to ensure its viability. The specific functions are: adaptation, goal attainment, integration, and latent pattern maintenance

(AGIL). These functions, in turn, operate through the organismic, personality, social, and cultural systems, respectively. The subsystems are integrated by information and energy flows which also act as control devices. These flows of information and energy are in a hierarchic direction. The flow of information is in the following way. The cultural system controls the social system, which, in turn, controls the personality system, which then controls the organismic system. Energy flows in the other direction. The organismic system energizes the personality system, which energizes the social, which in turn, energizes the cultural system. Social change will occur when there is an excess of either information or energy which serves to strain a system and force it to adapt in some new manner.

The information contained in the Thai authoritarian culture influences paternalistic attitudes among rural Thai villagers, which in turn influence villagers' participation in governmental development programs as obedient citizens. Moving in the other direction, energy in the submissive personality of the Thai villagers holds their loyalty to the government, which provides the basis of legitimate authority in Thai society. For Parsons then, individual actors use energy and information to achieve specific goals and meet needs.

According to Parsons and Shils (1962), the meaning of an individual action is the meaning an actor attaches to it in relation to that person's goals and interests. An action is voluntary if it is selected by an actor from alternative means to achieve a goal. The situational context constrains the available alternatives. The situational context is defined by the external world and the actor's orientation to it. Orientation may be to either social or nonsocial objects. The situation is that set of cognitions, plans, and relevant standards which the actor uses to understand the situation. Each orientation includes alternative actions and future possibilities. The key element to an actor's orientation is the orientation to goals.

It would seem certain that social action theory is applicable in a general way to explain Thai rural villagers' behavior regarding the VPL program. The decisions that villagers make are seen as constituting a set of inter-related actions and arise out of an orientation to the situation in which they are acting. Thus, essential elements in this study are the actors (residents of rural Thailand), the situation (participation in the VPL program), the actors' orientation to the situation (represented by mind purification, abstinence from vice, perception of the program, and attitudes toward village activities), and the goal (participation in village activities). Social action

theory suggests that participation in the VPL program has a direct effect upon villagers' orientation to the situation and participation in village activities, and villagers' orientation toward the situation has direct effects upon participation in village activities. The interrelationship among the main concepts are shown in Figure 2.

### The Actor

From the standpoint of social action theory, actors are seen as goal seekers who bring to situations various ascribed and achieved characteristics. Parsons and Shils (1962) emphasized that some essential characteristics of the actor influence his or her action by effecting the types of orientations that he or she displays towards the various components of the situation. In this study, the essential characteristics which villagers bring into the situation are their socioeconomic and demographic attributes, such as sex, age, education, and income. These attributes are presumed to have decisive influence on their behavior.

Sex is the first major characteristic of individuals that is expected to be related to outlooks and life experiences. Experimental evidence supports the idea that perception is selective, and that individuals' experience is greatly influenced by sex (Thomas, 1923). In Thailand, especially in rural communities, males and females are usually expected to perform different roles and functions.

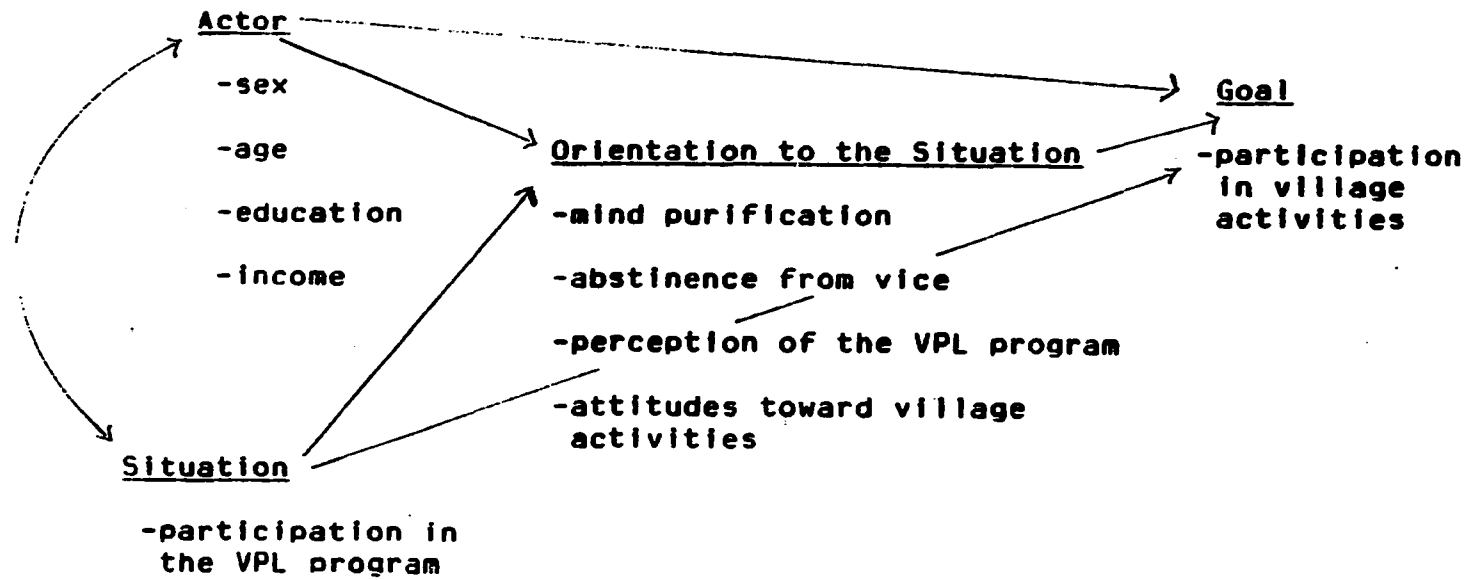


Figure 2. A theoretical model of actors, the situation, orientation to the situation and goal



Generally, rural Thais conceive of the essence of maleness as potency. This potency is manifested in the power man has to plant the "seed" of new life in women (Turner, 1983), and the seed of rice in the earth (Keyes, 1987). In rural Thai communities, aside from the agricultural work in which men and women participate more or less equally, women tend to dominate domestic activities (preparing food, caring for children, producing cloth, and managing the household economy), while men emphasize public roles (serving in village leadership positions, administering shrine and temple property and functions, and interacting with government officials).

Research in developing countries (Sender, 1974; Lele, 1975; Fortmann, 1977) reports that women have not been adequately involved in development process decisions, nor have they received the benefits of development even in villages where women outnumber men. The literature also indicates that women lag behind men in access to agricultural services, technical information, and education (Staudt, 1975; World Bank, 1979; Fortmann, 1981; Ward, 1984). If women get information at all, they get secondary information from their husbands (Fortmann, 1977). In the case of rural Thailand, where participation in any governmental-sponsored program/activity is considered mainly a

male activity, it is likely that males participate in those activities more than females.

Age is another characteristic of villagers that is expected to either encourage or constrain participation in the development program. Ogburn (1923) noted that habits are entrenched with age and that age is correlated with an actor's orientation and behavior. Mannheim (1952), in his theory of generations, noted that members of specific age groups have particular attitudes due to their unique socialization and experience. Marsk and Coleman (1965) and Rogers (1983) reported that elderly farmers tend to be less innovative than younger ones. The usual conclusion is that with increasing age, attitudes and taste become more and more rigid and consistent. Hence, the elderly would be more resistant to any new program that would require a change from the old ways of doing things to new ones. Other factors, in addition to psychological ones, need to be considered. Older villagers may not necessarily be less participative than their younger counterparts; instead, such factors as health and declining energy may be major constraints on participation. If this is so, we would expect that older villagers would participate less in development programs/activities than the younger generation.

Education is another major factor that determines social positions of individuals, which in turn determines

their response to situations. The level of an individual's education, either formal or informal (the acquisition of knowledge and skills through vocational and technical training), has been found to have both direct and indirect attitudinal and behavioral impacts on individuals. First, the effect of education on attitudes is that of increasing support for liberal values, open-mindedness, belief in the efficacy of science and the receptivity to change (Inkeles et al., 1983). Crouch and Payne (1984) found that farmers' education is related to their economic value orientations (such as achievement, progressiveness, beliefs in science, and profit orientation), which is directly related to their adoption of new ideas for their property development. Second, education, through literacy, provides its recipients with relatively greater access to sources of information and knowledge (Inkeles et al., 1983). Hooks et al. (1983) suggested that exposure to information sources accelerates the adoption process because people are made aware of the potential benefits associated with adoption. Ryan (1969) reported that, typically, educated individuals are highly participative in social affairs. Education in the broader sense is a measure of participation in the wider cultural world. The broader participation per se helps establish a frame of mind that is receptive. Therefore, it is likely

that villagers with higher levels of education would be more likely to participate in development programs/activities.

Past research reports positive relationships between socioeconomic status and innovativeness (Ryan, 1969; Rogers and Shoemaker, 1971; Rogers, 1983). Generally, greater profits go to the first to adopt. Some new ideas are often costly to adopt and require large amounts of capital, so it is only the wealthy who are able to adopt. Moris (1981) in his study of village development in Tanzania reported the significance of the "progressive farmer" approach. This plan provided extension and agricultural inputs to rich farmers with the assumption that poor farmers would follow the progressive ones. However, he found the adoption rate by the poor farmers was very low due to economic constraints. In their study on farmers' adoption of soil conservation plans in Iowa, Korsching and associates (1985) also found income to be one of the major influences on adoption. They indicated that high costs of farm inputs made it possible only for high income farmers to adopt plans. Nowak (1987), in his study of adoption of agricultural conservation technologies in central Iowa, found economic status of the farmers related to an adoption of new practices. He pointed out that high income farmers have less risk in adopting new technology since they have more financial support compared to low income farmers. Hooks et

al. (1983) maintained that poor farmers will always be at a comparative disadvantage in the diffusion process due to their lack of access of information and material prerequisites regardless of their psychological propensities to do so.

Rogers (1983) studied the relationship between innovativeness and status-seeking motivation. He found that certain individuals are more highly motivated by status seeking than others. In general, the middle and upper-middle classes seem to exhibit a stronger concern with the status aspects of innovativeness. In rural Thai communities, people with higher levels of income tend to interact more with government officials for the sake of prestige as well as to obtain other benefits such as information, knowledge, and facilities. They also tend to participate more in governmental development programs (Keyes, 1987). Thus, one's income level is a determining factor in one's decision to adopt or reject a new idea. In the Thai situation, therefore, we would expect a positive association between level of income and participation in development programs/-activities.

In sum, socioeconomic characteristics are major components that actors bring into the situation. These characteristics either alone or in concert have a decisive

influence on actors' interpretations of their situations which ultimately influence their behavior.

### The Situation

The situation is the part of the external world to which the actor is oriented and in which the actor acts. It is composed of both social and nonsocial objects that facilitate the actor's orientation to the situation. Coward (1969:60) distinguished between social and nonsocial objects:

Social objects are those objects in the situation which are capable of interaction with the actor, those objects which have reactions and attitudes which are significant to the actor, e.g., other actors in the situation. Nonsocial objects are those objects in the situation lacking this interaction property, e.g., physical and cultural objects.

In this study, the situation of action for Thai villagers includes both social and nonsocial objects of orientation. Among the social objects are change agents, Buddhist monks, friends, and relatives. For the nonsocial objects, perhaps the most important is the content of the VPL program, the village center, and the temple where the program sessions are held.

### The VPL Program as Nonsocial Object

The VPL program, as many other rural development programs in other developing countries, takes a human resource approach aimed at investing in human capital (Jones

and Pandey, 1981). Savary (1979) noted that in developing nations where development of the countries depends upon agriculture, investment in human resources is considered to be the most important and prerequisite factor in agricultural and rural development. This is because, in the short run, the human resource approach aims to mobilize and develop human resources for the promotion of their own well-being. In the long run, the approach seeks to involve people in policy planning and program implementation in order to improve the economic, social, and cultural conditions of the society at large (Jones and Pandey, 1981).

The most rigorous strategy of human resource development emphasizes increased education and participation of the people involved (Nyerere, 1979). Generally, it is the goal of most governments of the developing nations to provide formal education to the masses, especially rural people. However, limited budgets make the effort nearly impossible. Nonformal education, such as training programs provided through extension services, is a major source of rural people's education in most developing countries (Coombs and Ahmed, 1974; Nash, 1981; Bennett, 1982). Ladewig (1984) stated that extension as an educational program emphasizes involvement of people in determining, planning, and conducting programs that meet their needs. These educational programs help villagers identify their basic needs, build up

their awareness about who they are and what they want to do with their lives, and create in them a sense of participation in the development in their community (Lema, 1977). Moland (1981) in his study of training for rural development in Tanzania found that training was conceived as an important aspect in conducting various development programs. Mamat (1982) in his case studies in Malaysia, Philippines, and Sri Lanka explored strategies for educating peasants in residential training institutions and village-based organization. He found that farmers wanted training in various areas, especially training that covered both agricultural and nonagricultural concepts.

Development programs, such as the VPL, are a means of providing nonformal education in Thai rural areas. The goal is to provide rural people with knowledge about village development to encourage improvement activities and about Buddhist doctrine as a mechanism to purify their minds and to increase their abstinence from vice. It is also a means of delegating responsibility to rural people in order to attack their own poverty (Coombs and Ahmed, 1974; Chambers, 1983). This is because the program concentrates on developing a spirit of self-help, self-reliance, and self-improvement among rural people. Finally, it aims to encourage villagers' participation in development efforts such that governmental development programs can be sustained even



after initial improvements have occurred. The program promotes citizen participation as a therapeutic method for rural people to learn how to overcome their helplessness and despair (Burke, 1983).

#### Change Agents and Buddhist Monks as Social Objects

How effective the VPL program is in achieving its intended objectives depends on the contribution of the two key social objects -- change agents and Buddhist monks -- who are the two most important opinion leaders in rural Thai communities. Change agents are professionals who influence villagers' decisions and behavior in a direction deemed desirable by a change agency. They have important roles in transferring information about the program that generates awareness and interest among rural people (Leonard, 1982; Brara, 1983; Rogers, 1983). Lionberger and Gwin (1982) noted that the extent and nature of contacts by villagers with change agents and the function and the credibility of change agents are important for effective communication between them. The idea of horizontal or two-way communication by change agents is essential in order to gain access to target groups and to facilitate the conversion of the information into practice (Jedlicka, 1980; Lionberger and Gwin, 1982; Brara, 1983). Although the mass media has an important supporting role for the VPL program, interpersonal channels such as face-to-face communication seem to

be more important in bringing about changes in attitudes of the villagers. Rogers (1983) noted that communication is more effective when pairs of individuals interacting are similar in certain attributes, such as beliefs, education, and social status, but not similar regarding innovation or new ideas. Communication processes involve villagers and change agents creating and sharing information with one another in order to reach mutual understanding. Berelson and Steiner (1964) pointed out that a communicator is most successful when he/she tells people what they most want to be told. In a broader sense, the effectiveness of the VPL program is a function of the source of information (government), how the information is transmitted (through the VPL program), the objectives of the communicators (change agents and Buddhist monks), and above all the extent to which the message (the program content) meets the needs, interests, and aspirations of the ultimate receivers (villagers) or the community as a whole.

By virtue of their positions, Buddhist monks (and, for that matter, the Buddhist religion as a whole) play a decisive role in the process of mind purification and abstinence from vice. As custodians of virtue and teachers of Buddhist doctrine, the monks, especially in rural Thailand, are held in a very high esteem. As Beyer (1974:69) said of Monks, "the most serious offenses (murder,

theft, sexual intercourse, and lying about spiritual attainment) lead to expulsion from the community: if the offense is conceded, the offender is simply no longer a monk, and that is the end of the matter." Thus, the monks' adherence to chastity and their performance of religious functions confer on them a great deal of prestige and an aura of sacredness. Consequently, they constitute the opinion leaders in their communities as well as community role models for moral restraint.

#### Orientation to the Situation

Villagers' orientation to the situation is represented by mind purification, abstinence from vice, perception of the VPL program, and attitudes toward village activities.

#### Mind purification

According to Buddhist doctrine, mind purification refers to strict adherence to chastity through the application of the Lord Buddha's precepts. Like most of the major religions in Asia, Buddhism states that self-control is a central discipline (Runciman, 1978). Buddhism teaches that humans determine their own destiny (Karma). Endowed with freedom and will, humans can learn to overcome greed, hatred, and error (Benz, 1965). Buddhists believe that every act, word, and thought has consequences, which appear sooner or later in the present or some future state. Good

deeds have good consequences, and evil deeds evil effects (Blanchard, 1958). The goal of life for human beings is not the satisfaction of material needs but cleaning the heart of all passions; that alone leads to happiness and peace and release from all suffering (Benz, 1965).

The relevance of Buddhism to society is reflected in its teachings on love, kindness, and sympathy for all living things. Also Buddhism reforms the evil of the world not by outward measures but by purifying hearts. Benz (1965) argued that Buddhism's advocacy of peaceful methods, tolerance and good will, and hatred for violent revolutions can be employed to bring about the improvement of social conditions. This can be achieved by following the eight-fold path of the Lord Buddha, namely right understanding, right thought, right speech, right action, right livelihood, right effort, right mindfulness, and right concentration (Niyanatiloka, 1971). The eight-fold path of the Lord Buddha emphasizing education and spiritual enlightenment is widely viewed as the means of reforming society (Benz, 1965).

In addition to encouraging rural Thai people to follow the path of the Lord Buddha, the mind purification component of the VPL program further encourages them to apply three other tenets of the doctrine for the goal of community development. According to Buddhist doctrine, the three

tenets include Patiyutti, Patibutti, and Pativej (NRC, 1986a). Patiyutti refers to the investigation and understanding of the existing problem. Patibutti refers to the process of putting knowledge about problems into practice in order to reach the third stage, Pativej, which is the application of knowledge and ability to solve problems for a better life for everyone in the community. In order to reach Pativej, it is first necessary to have a purified mind. Thus, one of the main aims of the VPL program is to encourage villagers to follow Buddhist doctrine as a means for them to attain mind purification.

#### Abstinence from vice

Closely related to mind purification is abstinence from vice. According to Buddhism, abstinence from vice can be achieved by practicing five Buddhist moral precepts: abstinence from killing living beings, stealing, sexual misconduct, false speech, and the use of dangerous drugs and other intoxicants (Niyanatiloka, 1971). By encouraging rural Thai people to practice these five Buddhist precepts regularly, the VPL program expected them to increase their level of abstinence from vice, which in turn would rekindle their spirit of cooperation as reflected in participation in village improvement activities.

### Perception of the program

Villagers' perceptions of the program are formulated after they receive the necessary information about the VPL program and evaluate how it can solve their real and perceived problems. Clark and Akinbode (1968), Rogers and Shoemaker (1971), and Rogers (1983) noted that individuals' favorable perceptions can predict the success of any program. Boyle (1981) suggested that understanding of how villagers perceive the program could improve existing programs and/or plan better future programs. Rutachokoziwa (1985) in his study of training programs for rural development in Tanzania found that villagers' favorable perceptions toward the program increased their abilities to conduct development programs. He pointed out further that villagers' perceptions of the program influenced their awareness about development potentials and limitations. According to Rogers (1983), after individuals make subjective evaluations about a program regarding function, advantages, and capacity to solve problems, they will decide to adopt or reject it. People, he argued, tend to perceive a program as favorable if they find it profitable, relevant to their needs, and consistent with their beliefs. In addition, an individual's favorable perception of the program is also a function of the program's attributes, especially its compatibility and relative advantages (Rogers, 1983; Lionberger and Gwin,

1982). Compatibility is the extent to which the program fits rural peoples' views of what ought to be, what they can do to solve their problem, and how they can do it. A program that is more compatible with peoples' existing values, past experiences, and needs is less uncertain to them and thus tends to be perceived as favorable (Rogers, 1983). Relative advantage generally refers to the advantage the program has in terms of its economic and social benefits. The program that can bring a high degree of economic profitability and decrease discomfort in villages is more likely to be perceived as favorable (Rogers, 1983; Lionberger and Gwin, 1982).

Gaining favorable perceptions of the VPL program from villagers involves strong persuasion from a change agent. How the change agent performs his/her role and how effective he/she is in explaining to villagers the underlying principles of the program influence beneficiaries' perceptions of the program (Rogers and Shoemaker, 1971). Though formal general knowledge about the program seems to be adequate for villagers' initial favorable perceptions, a basic understanding of the principles of the program is more important for its success in the long run. Given that a great majority (95 percent) of the villagers are Buddhist (Keyes, 1987), that the VPL program had Buddhist monks working side by side with government change agents, and, above all, that

It uses general precepts of the Buddhist religion, one would expect the villagers to develop a favorable perception of the VPL program and ultimately participate in community development activities.

#### Attitudes toward village activities

Attitudes toward village activities are formed at the evaluation stage in the adoption process. Here villagers evaluate the information they have received from the program and form their attitudes accordingly (Rogers, 1983). Korsching and associates (1985) and Nowak (1987) found that people tend to form positive attitudes toward activities they found advantageous and rewarding. It is assumed that such persuasion by change agents will lead to a subsequent change in villagers' decisions and overt behavior consistent with the attitudes held (Rogers, 1983). There is a growing body of literature that suggests that change agents get more messages accepted if receivers see them as similar to themselves in background, attitudes, and experiences (Schafer and Tait, 1981; Smith, 1982) and where communication is two-way and participative (Jedlicka, 1980). In our setting, in order to form favorable attitudes, change agents need to work closely with rural people and thus make messages more understandable and acceptable.

Berelson and Steiner (1964) pointed out that the acceptance or rejection of development programs depend on



the trustworthiness or credibility of change agents. Rogers (1983) added that change agents not only have to contact people before they introduce an intervention, but they also need to be aware that the intervention is consistent with people's needs and goals. This suggests that people are more likely to form positive attitudes toward activities that are of benefit to them and that are consistent with their needs, beliefs, and values. Positive attitudes will influence decisions of villagers. Therefore, it is expected that when the mentioned conditions are present, participation in the VPL program is more likely to lead to positive attitudes and participation in village improvement activities.

In sum, the situational context of the VPL program as performed by change agents and Buddhist monks orients villagers toward mind purification, abstinence from vice, favorable perception of the VPL program, and positive attitudes toward village activities. According to social action theory, the situation has a direct effect upon actors' orientations. It is hypothesized that the situation, participation in the VPL program, has a direct effect upon villagers' level of orientation, which is represented by mind purification, abstinence from vice, perception of the program, and attitudes toward village activities. The hypothesis to be tested is:

- H1. Participants in the VPL program are more likely to have higher levels of mind purification, more abstinence from vice, more favorable perceptions of the program, and more positive attitudes toward village activities than are nonparticipants.

### Goal

An actor's orientation is towards a goal (Parsons and Shils, 1962). The goal of the VPL program is to encourage participation in village improvement activities. Ackerman (1981) noted that in community development, the individual's decision to participate is very much a matter of choice and not a matter of course. People are not likely to participate in an action unless they feel the need for it, or unless the goal of participation leads to outcomes relevant to their needs and consistent with their attitudes and beliefs (Rogers, 1983).

Rutachokoziwa (1985) studied the effect of a training program on village development in Tanzania. He found that the capacity of the training program to solve villagers' problems was one of a major factors influencing participation in development activities. Other researchers indicated several factors that influence people's participation. Heiss (1981), drawing on social learning theory, stated that attention to any activity is much greater when the individual is a participant rather than a bystander. Leonard (1982) suggested that rural people are more likely to participate in any activity if they find that the

activity benefits every segment of the community and if benefits are linked to the use of resources they have in abundance (e.g., activities that are labor-intensive). Similarly, Smith (1982) maintained that people are more likely to participate in development activities if they can anticipate something personally rewarding. Often conformity to norms itself becomes a reward. Bulmer (1983) moved one step further to indicate that rural people in less-developed countries are more likely to perform according to collective ideas and beliefs. He attributes this to their lack of self-awareness or self-consciousness. Thus they are more likely to participate if they find the activities compatible with community values, norms, and goals. Other factors that effect peoples' willingness to participate depend on whether the activities are consistent with people's self-interest (Jones and Pandey, 1981), supported by local leaders (Lewin, 1947), and supported by groups they identify with (e.g., reference groups) (Kuhn, 1978).

The VPL program covers religious and village development activities that are consistent with villagers' needs and interests. The program also is supported by Buddhist monks, who are important local leaders. According to social action theory, the situational context has a direct effect upon the ultimate action of the actors. It is thus hypothesized that the situation, participation in the VPL

program, has a direct effect upon villagers' ultimate action (goal), participation in village improvement activities.

The hypothesis to be tested is:

- H2. Participants in the VPL program are more likely to participate in village activities than are nonparticipants.

Whether this relationship persists when background variables and variables that make up orientation are controlled also will be examined. The hypotheses to be tested are:

- H3. The relationship in H2 will continue to be significant when controlling, individually or together, the background variables of sex, age, education, and income.
- H4. The relationship in H2 will continue to be significant when controlling, individually or together, the orientation to situation variables -- mind purification, abstinence from vice, perception of the programs, and attitudes toward village activities.

The last proposition drawn from social action theory suggests that actor's orientation to the situation has a direct effect upon ultimate action. Thus, it is hypothesized that villagers' orientation toward the situation, represented by mind purification, abstinence from vice, perception of the program, and attitudes toward village improvement activities, has a direct effect upon villagers' ultimate action, participation in village activities. The hypothesis to be tested is:

- H5. Participants in the VPL program who reported a high level of mind purification, abstinence from vice, favorable perception of the program, and positive attitudes toward village activities are more likely to report a high level of participation in village activities than are participants who reported lower levels on the orientation variables.

In summary, actors' characteristics and their orientation to a situation are posited as the basis for their subsequent action or behavior. The situation may be social in nature, as are the roles of change agents and Buddhist monks. It can also be nonsocial in nature, as is the VPL program. Along with the personal characteristics of the villagers, these factors define the situation to which villagers perceive and react. It is in this reaction that we can identify the different behavior patterns that circumscribe villagers to their participation in the VPL program on one hand and their participation in village activities on the other.

## CHAPTER IV. METHODS

This chapter deals with data and data collection, sampling procedures, presentation of the data, operationalization of the test variables, and the statistical techniques used in analyzing the data.

### Data and Data Collection

The data used in this research are from the 1986 study of the Peoples' Participation in the Virtuous and Prosperous Land program collected by the National Research Council of Thailand (NRC) during May-July of 1986. The data are from a cross-sectional sample survey. The sample consists of 1,084 respondents from selected villages under the VPL program. Some of those surveyed participated in the program and some did not. Six hundred and two of them were from Payao province which is in the northern region, and 482 were from Surattani province which is in the southern region. All respondents are Buddhist. Face-to-face structured interviews (1986b, see Appendix A) were used to collect the data.

### Sampling Procedures

Purposive sampling was employed to select regions and provinces for the study. Out of the four regions of the

country, the northern and the southern regions were selected. Within a region, a province that had all of its villages under the VPL program was selected. Available transportation was the major criterion for selecting districts and sub-districts for the study. The transportation criteria were that districts should not be more than 70 kilometers from the selected province and sub-districts should not be more than 70 kilometers from the selected district headquarters. A village to be selected had to contain at least 100 households so that researchers could sample at least 70 households per village. This was done to save time and money (NRC, 1986a).

Multi-stage random sampling was employed to select households from villages and villages from within sub-districts within districts. At the first stage, five districts were randomly selected from each of the two provinces. In the second stage, a sub-district was randomly selected from each chosen district. In the third stage, two villages were randomly selected from each chosen sub-district. And at the final stage, 100 households were randomly selected from each village. The final sample consists of 1,084 households from 19 villages (NRC, 1986a).

The unit of analysis was the head of the household. However, by the time of the survey (May-July), which was the

farming season, most of the household-heads were busy on the farms. Other adult members of the family, who were available at home, were then substituted for them (NRC, 1986a).

#### Presentation of Data

Five issues from the collected data were selected for analysis. They were chosen as indications of program effectiveness (Boyle, 1981). The evidence (according to Boyle) included a record of actual practice (participation in the VPL program); evidence of change in physical, social, or cultural environment (mind purification and abstinence from vice); favorable perception of participants (perception of the VPL program); rating on attitudes scales dealing with an affective domain (attitudes toward village activities); and actual behavior (participation in village activities).

Due to the cross-sectional data used in this study, a one-time comparison between participants in the VPL program (the experimental group) and nonparticipants (the control group) will be employed, using statistical control to hold constant known differences between the two groups (Rossi and Freeman, 1982). The preintervention factors, such as socioeconomic variables and orientation to situational factors, will be used as control variables.

The results of this study will be utilized by decision-makers to improve the quality of rural community development programming in Thailand. Given differences in



professional and academic backgrounds among Thai decision-makers, data are initially presented in a less complex format followed by a more statistically sophisticated analysis. The dual presentation of data will satisfy the study's objectives as well as speak to less technical audiences who might use its findings to implement and modify programs at the village level. In Thailand, as in other developing countries, research reports that are easily understood by decision-makers are more likely to be utilized. Easily interpretable and less complicated illustrations of the data (such as by cross-tabulation and correlation) are employed to serve this purpose.

As part of the chi-square analysis, the data are categorized as dichotomous (high-low) variables. Categorizing variables into dichotomies makes for easy interpretation of the tables. Even though collapsing variables, especially continuous ones, is often necessary to make tables manageable (Pedhazur, 1982; Johnston, 1984), it should be noted that the problems of lost information and of reduced sensitivity in the analysis are inevitable (Pedhazur, 1982).

Bailey (1982) suggested three basic collapsing strategies, one theoretical and two empirical. In the theoretical strategy the researcher's theory or research goal provides clues about where to split the variable. One of the empiri-

cal strategies is to look for the gaps in the empirical distribution. The basic goal is to avoid borderline cases. The second is uniform or proportionate collapsing which aims at attaining a certain proportion of cases in each cell so that each cell contains a certain proportion of the possible range of values. Pedhazur (1982) points out further that, statistically, researchers may choose mean or median splits or create their own middle groups. In this study, the dividing line is created by adding the minimum and maximum scores together and dividing by two. For example, the responses on mind purification ranged between 15 to 35. The middle is  $(15 + 35)/2 = 25$ . Thus, the two categories of mind purification are 15-25 for low mind purification and 26-35 for high mind purification.

#### Operationalization of Variables

Participation in the VPL program (PART) is measured by actual participation in the VPL program. The respondents were asked: Did you join the VPL program? Scores were assigned as 1 for yes and 0 for no.

Mind purification (MIND) is measured by the Index of peoples' attitudes toward virtue and vice. The following statements were read to respondents:

1. A man of virtue these days is not a modern man.
2. Smoking/taking intoxicants/liquor are important for social life.

3. Buying underground lottery tickets and gambling are a normal activity.
4. Going to the temple to pray and practice merits are a waste of time.
5. Quarrels in a family are a normal activity.
6. The program for mind purification causes unity and cooperation in the village.
7. Mind discipline is an important factor for improving the village.

Items 1 through 5 were coded from strongly agree (1) through strongly disagree (5). The coding was reversed for items 6 and 7. The seven items, when combined into an index, had a Cronbach's alpha of 0.58 and a standardized alpha of 0.62. The responses ranged between 15 and 35 with a mean of 29.0 and standard deviation of 4.00. As part of chi-square analysis, the scores were collapsed into two categories, with 15-25 equalling low mind purification and 26-35 denoting high mind purification.

Abstinence from vice (ABSVICE) refers to the extent to which people reduce intoxicants/liquor, gambling, and drugs. To determine the extent of abstinence from vice, each respondent was asked: At this moment, have you reduced or given up the following habits: cigarette smoking, intoxicant/liquor taking, buying underground lottery tickets, gambling, and drug use? Possible responses were not given up, have not taken any, have decreased, and have given up. Each of the four vices were recoded, with 1

assigned to those who originally responded that they had not given up, had decreased or had given up, and 2 for those who had not taken any. The high score indicates low levels of participation in vice. The responses of abstinence from vice ranged between 5 and 10 with a mean of 8.52 and standard deviation of 1.31. The scores were collapsed into two categories: 5-7 for low abstinence from vice, and 8-10 for high abstinence from vice.

Perception of the program (PCEP) is measured by the Index of perception of the VPL program. The respondent's perception score is composed of responses to the following questions:

1. The program uses Buddhism as guidelines for development of mind.
2. The program aims at cooperation of villagers to develop their own village.
3. The program provides villagers' better well-being.
4. The program is very important for village development.
5. The program is useful for your village.
6. The program provides peace for your village.
7. The program is only for development of mind.
8. The program does not mean to hold back gambling and alcohol drinking in the village.
9. The program makes you confused.

Items 1 through 6 were coded as strongly agree (5) through strongly disagree (1). For items 7 through 9, the

coding) was the opposite. The nine items, when combined into an index, had a Chronbach's alpha of 0.78 and a standardized alpha of 0.82.

The responses ranged between 20 and 45 with a mean of 38.6. and standard deviation of 4.57. The scores were collapsed into two categories: 20-33 for less favorable perception of the VPL program and 34-45 for more favorable perception of the VPL program.

Attitudes toward village activities (ATTVIL) is measured by the following questions:

1. Cooperation in village activities is not necessary.
2. Cooperation has no effect on village improvement.
3. If your neighbors did not want to participate in the program activities, it is not your responsibility to persuade them.
4. If the village improvement activities need some cash donation, you are willing to donate.
5. If you can not offer cash donation, you are willing to offer your labor instead.
6. Taking care of all products/innovations from the program is the responsibility of villagers.
7. If you can not participate in the program activities, you will ask other members of your family to do so on your behalf.

Items 1 through 3 were coded as strongly agree (1) through strongly disagree (5). For items 4 through 7, the coding was the opposite. The index of attitudes toward village activities, had a Cronbach's alpha of 0.68 and a standardized alpha of 0.73. The responses ranged between 17

and 35 with a mean of 31.5 and standard deviation of 3.31. The scores were collapsed into two categories: 17-26 for less positive attitudes toward village activities and 27-35 for more positive attitudes toward village activities.

Participation in village activities (PARTVIL) refers to actual participation of respondents in village improvement activities. Each respondent was asked: After the VPL program had been introduced to your village, did you participate in the following village activities (can choose more than one): building fences, growing trees, building roads, building way-side shelters, building trash baskets and/or trash burners, or building water closets?

Respondents engaged in from 1 to 6 village activities, with a mean of 4.4 and standard deviation of 1.18. The scores were collapsed into two categories: 1-3 for low participation in village activities and 4-6 for high participation in village activities.

#### Control variables

The respondent's sex is classified as 1 for male and 2 for female. Age is measured by a single indicator, the number of years reported by a respondent up to and including his/her last birthday. The responses ranged between 20 and 65 with a mean of 41 and standard deviation of 11.72. The scores were collapsed into two categories: less than 40 years and 40 years and older.

Education was obtained as never attended school, primary education, and higher than primary education. Since only 76 of the respondents had secondary education or higher, the categories were recoded as never attended school (classified as low level of education) and primary education and higher (classified as high level of education).

Income is defined as the total earnings from all economic activities the family engaged in during the year preceding the survey (1985). The respondent's income is classified as less than 12,000 baht, 12,000 baht-21,000 baht, and more than 21,000 baht. According to recent (1984) national income indicators (Office of the National Economic and Social Development Board, 1984), the per capita income of the northern region is 13,353 baht (27 baht is equivalent to U.S. \$1.00), and the per capita income of the southern region is 15,358 baht. The categories were recoded as less than 12,000 baht (classified as low level of income) and 12,000 baht and more (classified as high level of income).

#### Statistical Techniques

Three analytical techniques are employed to examine the data. Chi-square analysis will be used to test for statistical independence. Pearson correlation will be used to measure the strength of association among test variables, and path analysis will be used to specify and evaluate causal relationships among the variables.

Chi-square ( $\chi^2$ )

Chi-square ( $\chi^2$ ) is a commonly used test of independence for crosstabulated variables. It is based on a comparison between the observed cell frequencies of a cross-tabulation with the frequencies that would be expected if the null hypotheses of no relationship were in fact true. The notion of zero relationship (independence) essentially means that the knowledge of one variable tells absolutely nothing about the scores of other variable.

The distribution of the difference between observed and expected values is indicated by the formula:

$$\chi^2 = \sum_{\text{All cell}} \frac{(O - E)^2}{E}$$

where O indicates the observed value and E the expected value. The larger the summed difference between observed and expected value, as a ratio of expected values, the larger the value of chi-square and the greater the likelihood that the relationship is statistically different from zero.

Important characteristics of the chi-square statistics are that  $\chi^2$  values are always nonnegative; the  $\chi^2$  value which has the greatest likelihood of being observed is in the neighborhood of its degree of freedom, which refers to



the potential for cell entries to vary freely, given a fixed set of marginal totals; and as the number of degree of freedom increase, the shape of  $\chi^2$  distribution becomes more bell-like (Bohrnstedt and Knoke, 1982). It is important to note that the  $\chi^2$  statistic is directly proportional to sample size. Doubling the cell frequencies in a table will double the calculated value of  $\chi^2$ , although the degrees of freedom remain unchanged (Bohrnstedt and Knoke, 1982). The sensitivity of  $\chi^2$  to sample size points to an important distinction between statistical significance and substantial importance in relationships between social variables. Two variables may covary only moderately, yet if the sample size is large enough, the null hypotheses can be rejected at almost any level of probability (Bohrnstedt and Knoke, 1982).

#### Pearson correlations

The correlation coefficient ( $r$ ) is commonly used for measuring the strength of a relationship between continuous variables. It provides a framework within which to do the initial examination of the significance and pattern of relationships among variables, and it is used as the primary input for path analysis. The correlation coefficient has a positive or negative sign to indicate the direction of covariation. The values range between -1.00 for a perfect inverse association and +1.00 for a perfect positive

covariation, while  $r=0.00$  indicates no relationship (Bohrnstedt and Knoke, 1982). The correlation coefficient can be obtained by the formula (Bailey, 1982):

$$r = \frac{N\sum XY - (\sum X)(\sum Y)}{[N\sum X^2 - (\sum X)^2][N\sum Y^2 - (\sum Y)^2]}$$

### Path analysis

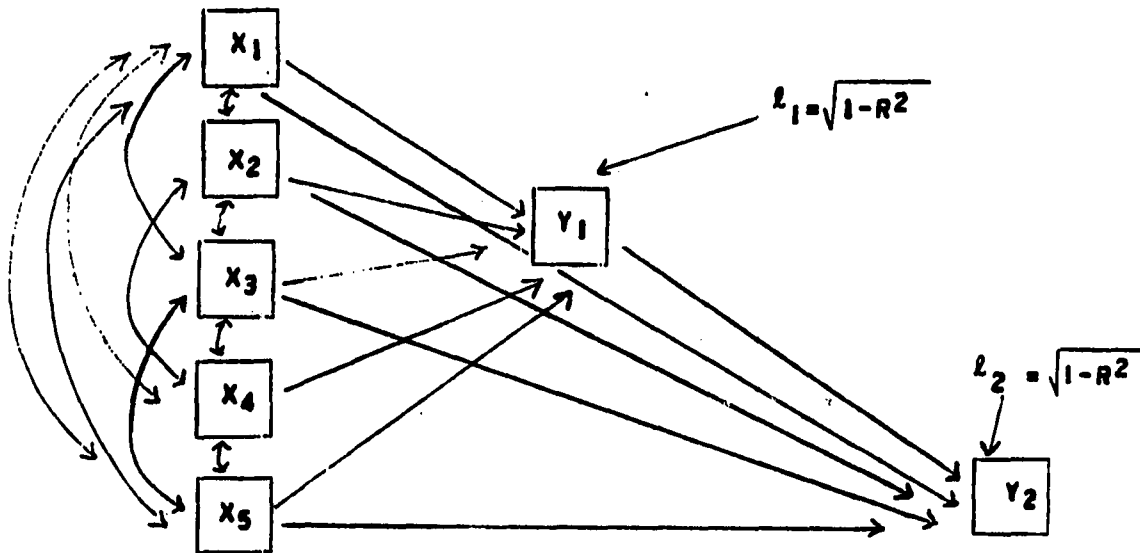
Path analysis was developed by Wright (1921) as a method for studying patterns of causation among a set of variables. It is designed to draw attention to the fact that causal thinking plays an important role in scientific research. Conventionally, researchers interpret covariation and correlations among variables for suggesting certain causal linkages (Pedhazur, 1982). However, correlation is not proof of causation. Path analysis is an attempt to combine the quantitative information given by the correlation with such qualitative information as may be at hand on causal relations to give a quantitative interpretation (Wright, 1934).

Generally, the path analysis technique employs multiple linear regression for assessing causal inferences. As an extension of multiple regression, path analysis provides more explicit causal relationships not only between one independent variable and a dependent variable, but also between a set of independent variables and the dependent

variables (Miller, 1981). It also generates coefficients that can be interpreted as measures of cause-effect relationships among the relevant independent variables in the model.

Using path analysis to evaluate causal models includes decomposing the effects of the variables in the model (Alwin and Hauser, 1975). There can be three different effects of one variable on another: a direct effect, an indirect effect, and a total effect. The direct effect is simply the part of the total effect not transmitted via intervening variables. The example of the direct effect is the path from PCEP to PARTVIL (see Figure 3). The indirect effects are those parts of a total effect which are transmitted by intervening variables (e.g., the indirect effect of PART transmitted through PCEP to PARTVIL). An indirect effect of one variable is calculated by subtracting the direct effect from the total effect. The effect of one variable on another is measured by its standardized path coefficient (B).

There is a difference between a standardized path coefficient and a correlation coefficient. While zero-order correlation coefficients simply measure the strength of relationships between two variables, standardized path coefficients measure the relative effects of one variable on



$X_1$  = sex (SEX)

$X_2$  = age (AGE)

$X_3$  = education (EDU)

$X_4$  = income (INCOME)

$X_5$  = participation in VPL program (PART)

$Y_2$  = participation in village activities (PARTVIL)

$Y_1$  = perception of the program (PCEP)

Figure 3. Path model predicting PARTVIL

another, assuming that other relevant variables are controlled and the causal order is correct.

According to the presented path model (see Figure 3), there are five exogenous variables, sex (SEX), age (AGE), education (EDU), income (INCOME), and participation in the VPL program (PART), in the model. Exogenous variables are those variables that are assumed to be determined by factors outside the causal model. The dependent, or endogenous, variables are those whose variability is accountable to both the independent and causally prior variables. Thus, this model contains two dependent variables: perception of the program (PCEP) and participation in village activities (PARTVIL).

The hypothesized causal links in the path diagram between variables are indicated by unidirectional arrows. The interrelationships among the independent variables are indicated by two-headed curved arrows. Residual variables ( $e$ 's) are shown by one-way arrows from each residual variable to its dependent variable. The residuals or disturbance terms ( $e$ 's) are the unmeasured or unknown factors that affect the dependent variables (Asher, 1976; Pedhazur, 1982). The residuals are assumed to be uncorrelated.

Another statistical coefficient that is required in path analysis is the coefficient of determination ( $R^2$ ). It

indicates the amount of variance in the dependent variable explained by the independent variables in the model. When  $R^2$  is less than one, a residual or error term ( $e$ 's), which is the square root of the unexplained variance,  $\sqrt{1-R^2}$  (Miller, 1981), is employed.

In applying path analysis, the researcher is required to make at least four assumptions. These are that the causal model presumes linear, additive, asymmetric relationships among variables (i.e., no reciprocal causation or feedback loop); the disturbance (error terms) of the dependent variables are not correlated with each other or with prior variables in the models; the variables are continuous; and the variables are measured without errors (Pedhazur, 1982).

Several researchers have indicated that these assumptions are very difficult to meet in applied research settings, especially in nonexperimental ones as usually occur in social science research. Heise (1969), for example, has questioned the assumption of random errors in social science research. Mention has also been made about the unrealistic nature of the assumption of nonreciprocal causality. As for the third assumption, though it is expected that continuous variables provide more precise predictions of the effect of exogenous variables on the dependent variables, some researchers, such as Labovitz

(1970), Boyle (1970), Smith (1970), and Sulaiman (1981), counter that the use of categorical or ordinal measurement can be substituted for interval variables in causal analysis without risking any major error or problems of interpretation. Finally, some of the inherent difficulties in measuring complex social phenomena such as attitudes and motivation with single indicators assumed in path analysis have been raised (Miller and Stokes, 1975).

Despite these difficulties, path analysis appeals to many researchers because of its succinct graphic presentation that shows relationships among all variables in the model simultaneously. It is also useful in allowing researchers to compute not only the direct effect of an independent variable but also the indirect effect on that variable through another variables. Finally, its ability to evaluate the extent to which a specified model fits the data makes it appealing to current sociological research. For these reasons, path analysis is used in this study.

## CHAPTER V. ANALYSIS AND FINDINGS

The results of the data analyses are presented in this chapter. First, the hypotheses derived in Chapter III are explored using simple bivariate tables, sometimes controlling for a third variable. Although some information is lost when data are collapsed into two categories, this loss may be more than compensated for by giving both the researcher and the reader a better "feel" for the data than do most other summarizing techniques. Second, the zero-order correlation matrix is presented and briefly discussed. Finally, since bivariate displays do not adequately control for other possibly confounding variables, the third section of the chapter uses methods of path analysis to evaluate the model.

### Tests of Hypotheses

Before discussing the results of tests of hypotheses from the chi-square analysis, respondents' characteristics and participation in the VPL program are presented. The purpose is to examine how participants and nonparticipants compare on the other exogenous variables, namely sex, age, education, and income. Of the 1,084 respondents, 464 were male and 620 were female (Table 1). Male respondents (80.8 percent) more often report participating in the VPL program



Table 1. Percentage of participation in VPL program by respondents' characteristics

Description		Participants (n=801)	Nonparticipants (n=283)	Total (n=1,084)
Sex	Male	375 (80.8%)	89 (19.2%)	464
	Female	426 (68.7%)	194 (31.3%)	620
$\chi^2=19.55$ P=.0001 (1)				
Age	< 40	382 (71.0%)	156 (29.0%)	538
	≥ 40	419 (76.7%)	127 (23.3%)	546
$\chi^2 =4.23$ P=.03 (1)				
Education				
	None	116 (76.8%)	35 (23.2%)	151
	Primary and higher	685 (73.4%)	248 (26.6%)	933
$\chi^2 =.61$ P=.43 (1)				
Income	< 12,000 B <sup>a</sup>	360 (74.4%)	124 (25.6%)	484
	> 12,000 B	441 (75.5%)	159 (26.5%)	600
$\chi^2 =.07$ P=.79 (1)				

<sup>a</sup>27 Baht is equivalent to \$1.00

than female respondents (68.7 percent). This result corresponds to past research (Lele, 1975; Fortmann, 1977; World Bank, 1979; Ward, 1984) that women, especially in the developing world, tend to engage more in domestic activities rather than become involved in development activities. In rural Thailand, participation in government-sponsored social development programs is considered a male activity. This is especially true when the activities involve village improvement activities such as building and repairing roads, building fences, and other tangible facilities.

Villagers who are 40 years of age and older are slightly more likely to participate (76.7 percent) in the VPL program than villagers who are under 40 years of age (71.0 percent). This finding contradicts some of the previous studies which associate age with resistance to change or participation in change programs (Ryan, 1969; Rogers and Shoemaker, 1971; Rogers, 1983). A possible explanation is that the elderly in Thailand, like elsewhere in the developing world (e.g., Stewart, 1985, in Zambia), are more selective in the types of government-sponsored social participation programs they support. Given that the program revolved around religion and virtue, it is not surprising that the elderly, who are considered to be custodians of morality, embrace the VPL program. More readily, the program could be interpreted by some of them as

an opportunity to reinforce or consolidate their convictions about the need for greater morality in their communities.

The effects of education are not strong. About 76.8 percent of the villagers who ever attended school report that they participated in the program compared with 73.4 percent for villagers with primary education and higher. Again, this finding fails to represent previous findings of a positive relationship between education and participation in development programs (Ryan, 1969; Rogers, 1983). Since one of the objectives of the program is to educate villagers about the consequences of vice, it is possible that villagers with higher levels of education might not see the need to participate because they feel they were aware of most of the content of the program.

Finally, there is only a slightly different percentage of participation between the two income levels. About 75.5 percent of villagers with annual income greater than 12,000 baht participated in the VPL program, compared with 74.4 percent of respondents with income lower than 12,000 baht. However weak this finding, it does corresponds with some of the past research. Ryan (1969), Rogers (1983), and Rutachokoziwa (1985) found that generally people are willing to learn more of what is of immediate use to them, especially in terms of helping to increase their income, and people with higher income tend to grasp more quickly what

would benefit them. It is possible, given that the VPL program promotes income enhancing activities (such as building and repairing village and district roads), that villagers with high income will be more attracted to the program since its activities offer the opportunity to increase their income.

#### Evaluation of Hypotheses: A Cross-tabulation Approach

This section will present results of testing the hypotheses derived in Chapter 3 using chi-square analysis. However, for better understanding of the analysis, as well as for interpreting the empirical model (see Figure 4), the analysis of this section will address the following questions:

1. Are there differences between participants and nonparticipants in their orientation to the situation? Hypothesis H1 will be tested.
2. Are there differences between participants and nonparticipants in their participation in village activities? Does the pattern persist when socio-economic variables are controlled? Does it persist when controlling for variables that make up orientation to the situation? Hypotheses H2-H4 will be tested.
3. Are there differences among the VPL participants in their participation in village activities considering their orientation to the situation? Hypothesis H5 will be tested.

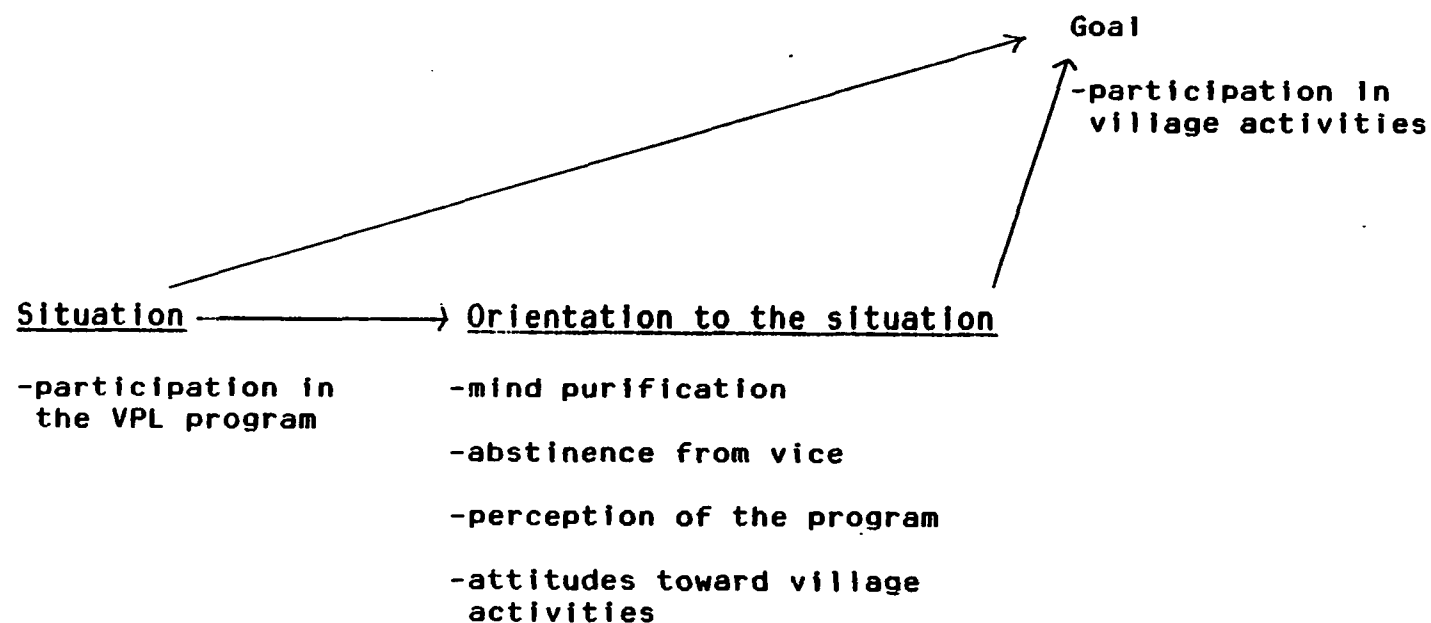


Figure 4. Empirical model of the situation, orientation to the situation, and goal

### Participation in the VPL Program and Orientation to the Situation (H1)

The first analysis is intended to examine whether there are differences between participants and nonparticipants in their orientation to the situation. The hypothesis that will be tested involves relationships between participation in the VPL program and orientation to the situation measured by mind purification, abstinence from vice, perception of the program, and attitudes toward village activities (H1). The results of the chi-square analysis in Table 2a shows that there exists a statistically significant positive relationship between participation in the VPL program and perception of the program. This result can be explained by the strategy of the program that uses Buddhist monks working side by side with governmental change agents and, above all, that it uses general precepts of the Buddhist religion as a mechanism for persuasion. It is thus reasonable that higher percentages of participants in the VPL program report a more favorable perception toward the program than nonparticipants. However, more than three-quarters of the nonparticipants report a more favorable perception toward the program too. This may imply that the program is relevant to villagers' needs and attitudes and beliefs, even to nonparticipants who might not be able to participate in the program because of farm work and other factors, rather than lack of interest in the programs.

**Table 2a. Percentage of participation in VPL program and orientation to situation: Mind purification, abstinence from vice, perception toward VPL program, and attitudes toward village activities**

Orientation to the situation	Participants	Nonparticipants	
<hr/>			
Mind purification			
Low	151 (18.9%)	63 (22.3%)	214
High	650 (81.1%)	220 (77.7%)	870
	$\chi^2=1.53$ P=.24 (1)		
<hr/>			
Abstinence from vice			
Low	194 (24.2%)	51 (18.0%)	245
High	607 (75.8%)	232 (82.0%)	839
	$\chi^2=4.25$ P=.03 (1)		
<hr/>			
Preception toward VPL program			
Less favorable	100 (12.5%)	57 (20.1%)	157
More favorable	701 (87.5%)	226 (79.9%)	927
	$\chi^2=9.89$ P=.01 (1)		
<hr/>			
Attitudes toward village activites			
Less positive	249 (31.1%)	104 (36.7%)	353
More positive	552 (68.9%)	179 (63.3%)	731
	$\chi^2=3.05$ P=.08 (1)		

The hypothesized positive relationships between participation in the VPL program and mind purification and attitudes toward the VPL program are not supported by the data. Though the relationships are not statistically significant, the tables show that higher percentages of nonparticipants report high levels for the two variables too, as compared to participants (77.7%:81.1% for mind purification, 63.3%:68.9% for attitudes toward village activities). Perhaps before the Thai government instituted the program, villagers may already have had a high level of mind purification and positive attitudes toward village activities, an indication that these two issues were not villagers' major problems. This implies that the Thai government should have conducted a needs assessment to determine villagers' existing problems before instituting the program. Of special interest is the inverse relationship between participation in the VPL program and abstinence from vice. According to Table 2a, 82.0 percent of the nonparticipants in the VPL program report a high level of abstinence from vice, compared with 75.8 percent for participants. A closer examination of the data for the three main vices (intoxicant/liquor using, cigarette smoking, and buying underground lottery tickets) is presented in Tables 2b-2d. Among participants who are involved in vice, about 15 percent to 25 percent report that they have



Table 2b. Percentage of intoxicant/liquor using by participation in VPL program

Intoxicant/liquor using	Participation in VPL program		Total
	Part.	Nonpart.	
Never used	437 (54.6%)	188 (66.4%)	625
Decreased or given up	201 (25.1%)	59 (20.8%)	160
Not given up	163 (20.3%)	36 (12.7%)	199
$\chi^2=13.31$ P=.001 (2)			

Table 2c. Percentage of cigarette smoking and participation in VPL program

Cigarette smoking	Participation in VPL program		Total
	Part.	Nonpart.	
Never smoked	379 (47.3%)	168 (59.4%)	547
Decreased or given up	206 (25.7%)	57 (20.1%)	263
Not given up	216 (27.9%)	58 (20.5%)	274
$\chi^2=12.16$ P = .002 (2)			

Table 2d. Percentage of lottery buying and participation in VPL program

Underground lottery  Buying	Participation in VPL program		
	Part.	Nonpart.	Total
Never bought	453 (56.6%)	164 (58.0%)	617
Decreased or given up	123 (15.4%)	47 (16.6%)	170
Not given up	225 (28.1%)	72 (25.4%)	297
	$\chi^2=0.82$ $P=.665$ (2)		

decreased or given up and 20 percent to 28 percent report that they have not given up the vice. Among respondents who reported that they have never smoked cigarettes (547), taken intoxicants/liquor (625), and bought underground lottery tickets (627), 87.5 percent, 80.3 percent, and 63.4 percent, respectively, were women.

The inverse relationship between participation in the VPL program and abstinence from vice can be rationalized as follows. First, by instituting a program to address the issue, it is implicit that the government appreciated the widespread nature of the problem. Second, since most of the problems were habitual in nature and had taken several years for participants to develop, it would be superficial to expect participants to break these habits after the implementation of a single program. This is even more so because a substantial percentage (76.7 percent) of all the participants were more than 40 years of age. Thus, in the absence of rewards and other forms of reinforcements one should not expect a sudden break in the specified activities.

#### Participation in the VPL Program and Participation in Village Activities (Hypotheses H2-H4)

The second analysis examines whether there are differences between participants and nonparticipants in their participation in village activities. Table 3a provides the results of the chi-square analysis. The hypothesized

Table 3a. Percentage of participation in VPL program and participation in village activities (PARTVIL)

PARTVIL	Participants	Nonparticipants	Total
Low	114 (14.2%)	74 (26.1%)	189
High	687 (85.8%)	209 (73.9%)	896
	$\chi^2 = 20.71$ P=.0001 (1)		

Table 3b. Percentage of participation in village activities (PARTVIL) by participation in VPL program and sex

		Sex				
		Male				Female
PARTVIL	Part.	Nonpart.		Part.	Nonpart.	
Low	42(11.2%)	18(20.2%)	60	72(16.9%)	56(28.9%)	128
High	333(88.8%)	71(79.8%)	404	354(83.1%)	138(71.1%)	492
$\chi^2=5.20$ P=.05 (1)			$\chi^2=11.65$ P=.0006 (1)			

Table 3c. Percentage of participation in village activities (PARTVIL) by participation in VPL program and age

PARTVIL	Age			
	< 40		≥ 40	
	Part.	Nonpart.	Part.	Nonpart.
Low	57 (14.9%)	36 (23.1%)	93 57 (13.6%)	38 (29.9%) 95
High	325 (85.1%)	120 (76.9%)	445 362 (86.4%)	89 (70.1%) 451
		$\chi^2=5.15$ P=.02 (1)		
			$\chi^2=18.05$ P=.0001 (1)	

Table 3d. Percentage of participation in village activities (PARTVIL) by participation in VPL program and education

PARTVIL	Education			
	None		Primary and higher	
	Part.	Nonpart.	Part.	Nonpart.
Low	20 (17.2%)	15 (42.9%)	76 94 (13.7%)	59 (23.8%) 153
High	96 (82.8%)	20 (57.1%)	75 591 (86.3%)	189 (76.2%) 78
		$\chi^2=9.91$ P=.001 (1)		
			$\chi^2=13.40$ P=.0002 (1)	

Table 3e. Percentage of participation in village activities (PARTVIL) by participation in VPL program and income

PARTVIL	Income			
	> 12,000 B		≥ 12,000 B	
	Part.	Nonpart.	Part.	Nonpart.
Low	62 (17.2%)	31 (25.0%)	93 52 (11.8%)	43 (27.0%) 95
High	298 (82.8%)	93 (75.0%)	391 389 (88.2%)	116 (73.0%) 505
X <sup>2</sup> =3.59 P=.05		X <sup>2</sup> =20.40 P=.0001		
(1)		(1)		

relationship that participants in the VPL program are more likely to participate in village activities than nonparticipants (H2) is supported by the data to a statistically significant degree. About 86 percent of the participants engaged in village activities, compared with 74 percent of the nonparticipants. However, this finding needs to be interpreted with caution. Generally, participation in one activity tends to lead to participation in other related activities. In rural Thailand, villagers are more likely to join the VPL program as patriotic citizens, and then automatically participate in village activities according to the objectives of the program.

Does the relationship between participation in the VPL program and participation in village activities persist when respondents' characteristics are controlled? Respondents of both sexes, both age groups, and both levels of education and income who participated in the VPL program were more likely to participate in village activities than nonparticipants (Table 3b-3e). This suggests that the positive relationship between participation in the VPL program and participation in village activities is not due to these socioeconomic factors.

The last subanalysis of this section examines whether the relationship between participation in the VPL program and participation in village activities persists when

controlling for orientation to the situation. The results of the hypothesized relationships (H4) are presented in Tables 4a-4d.

The relationship between participation in the VPL program and in village activities remains much the same no matter what the level of mind purification (4a), perception toward the program (4c), and attitudes toward village activities (4d), although the relationship is no longer statistically significant among those with less favorable perceptions. However, participation in the VPL program is not related to participation in village activities among respondents with low level of abstinence from vice (4b). The relationship among respondents with high level of abstinence from vice is similar to that for the general sample.

#### Orientation to Situation and Goal (Hypotheses H5)

The third analysis is to examine whether there are differences between participants in their participation in village activities, considering their orientation to the situation. The results from the chi-square analyses are presented in Table 5. There are statistically significant positive relationships between participants' level of mind purification, perception of the program, and attitudes toward village activities and participation in village improvement activities.



Table 4a. Participation in village activities by participation  
in the VPL program and mind purification

PARTVIL	Mind Purification					
	Low Part.	Nonpart.		High Part.	Nonpart.	
Low	31 (20.5%)	22 (34.9%)	53	83 (12.8%)	52 (23.6%)	135
High	120 (79.5%)	41 (65.1%)	161	567 (87.2%)	168 (76.4%)	735
	$\chi^2=4.94$ P = .02 (1)			$\chi^2=14.81$ P = .0001 (1)		

**Table 4b. Percentage of participation in village activities (PARTVIL)  
by participation in VPL program and abstinence from vice**

PARTVIL	Abstinence from Vice					
	Part.	Low Nonpart.		Part.	High Nonpart.	
Low	33 (17.0%)	8 (15.7%)	41	81 (13.3%)	66 (28.4%)	147
High	161 (83.0%)	43 (84.3%)	204	526 (86.7%)	166 (71.6%)	692
	$\chi^2=0.00$ P=.98 (1)			$\chi^2=25.46$ P=.0001 (1)		

**Table 4c. Participation in village activities and participation in VPL program and perception toward VPL program**

PARTVIL	Perception toward Program					
	Part.	Less Favorable Nonpart.		More Favorable Part.	Nonpart.	
Low	24 (24.0%)	21 (36.8%)	45	90 (12.8%)	53 (23.5%)	143
High	76 (76.0%)	36 (63.2%)	112	611 (87.2%)	173 (76.5%)	784
	$\chi^2=2.92$ P=.08 (1)			$\chi^2=14.75$ P=.0001 (1)		

**Table 4d. Percentage of participation in village activities (PARTVIL)  
by participation in VPL program and attitudes toward  
village activities**

PARTVIL	Attitudes toward village activities					
	Less Postitive		More Positive			
	Part.	Nonpart.	Part.	Nonpart.		
Low	49 (19.7%)	31 (29.8%)	80	65 (11.8%)	43 (24.0%)	108
High	200 (80.3%)	73 (70.2%)	273	487 (88.2%)	136 (76.0%)	623
	$\chi^2=4.29$ P=.05 (1)		$\chi^2=16.10$ P=.0001 (1)			

**Table 5. Percentage of participants' orientation to the situation and participation in village activities (PARTVIL)**

PARTVIL	Orientation to the Situation							
	HIND		ABSVIC		PCEP		ATTVIL	
	Low	High	Low	High	Low	High	Low	High
Low	31 (20.5%)	83 (12.8%)	33 (17.0%)	81 (13.3%)	24 (24.0%)	90 (12.8%)	49 (19.7%)	65 (11.8%)
High	120 (79.5%)	161 (87.2%)	526 (83.0%)	484 (86.7%)	76 (76.0%)	611 (87.2%)	200 (80.3%)	487 (88.2%)
	$\chi^2=5.43$ P=.01 (1)		$\chi^2=1.33$ P=.24 (1)		$\chi^2=8.04$ P=.004 (1)		$\chi^2=8.15$ P=.004 (1)	

These findings can be explained further. First, since participants in the VPL program are more likely to report favorable perception of the program, this would imply that they are more likely to find the objectives of the program favorable. Since the objective of the program is to promote several village activities, it is possible that participants who report favorable perception of the program would also report high participation in village activities.

The same is true for the case of attitudes toward village activities. Since participants in the VPL program report positive attitudes toward village activities, it is not surprising that they would also participate in those activities. Leonard (1982) points out that villagers will form positive attitudes toward and participate in any activity that benefits every segment of the community, especially when the benefits are linked to the use of resources they have in abundance (e.g., labor-intensive activities). The objectives of the VPL program covered all these activities. It is thus understandable that participants who report positive attitudes toward village activities would also report high participation in those activities.

For the case of mind purification, the finding is congruent with the assumption of the VPL program that villagers with a purified mind will participate more in

activities that improve the well-being of every one in the community. Buddhism states that good deeds have good consequences. The purified mind is thus the one that conducts good deeds. Kindness to neighbors and doing good deeds for them is an important virtue. Participation in activities that decrease village discomfort and make a better life for everyone in the community is considered one of those virtues. It is thus understandable that participants in the VPL program (which uses Buddhist monks as change agents) who report greater mind purification would also report high participation in village activities.

The hypothesized relationship that participants who report greater abstinence from vice are more likely to report high levels of participation in village activities than participants who report a low level of abstinence from vice is not supported by the data. There is no statistically significant difference in level of participation in village activities between them. The data reflect the fact that no matter what level of vice they have, the Thai villagers tend to participate in government-sponsored social programs because of their paternalistic attitudes toward the government. Participation in government-sponsored social development programs, or other activities suggested by the government for them, is a symbol of being cooperative as well as a symbol of good citizenship. Most important, it is

the symbol of loyalty to their government. It is thus not surprising that participants in the VPL program report a high participation in village activities regardless of the level and type of vice in which they engage.

Findings of this section needed to be interpreted with caution. Although the data indicate statistical significance in several instances, the percentage differences between participants and nonparticipants in most cases are under 12 percent. This suggests that substantive significance may be lacking.

#### Zero-Order Correlations

Another way to observe the relationships among variables of interest is to observe the strength of their intercorrelations. A correlation matrix based on uncollapsed data from the ten test variables is contained in Table 6.

Sex, age, and education are significantly related to participation in the VPL program. Males, older villagers, and villagers with lower levels of education tend to participate at higher rates in the VPL program. These findings correspond to the results from chi-square analysis. Again, the positive relationships between participation in the VPL program and perception toward the program and participation in village activities, and an inverse relationship between participation in the VPL program and



Table 6. Zero-order (Pearson) correlation coefficients (N=1,084)

	SEX	AGE	EDU	INCOME	PART	MIND	ABSVICE	PCEP	ATTVIL	PARTVIL
SEX	1.00									
AGE	-.15*	1.00								
EDU	-.05**	-.30*	1.00							
INCOME	.00	-.04	.26*	1.00						
PART	-.14*	.06*	-.08*	-.02	1.00					
MIND	.09*	.01	.08*	.06**	.04	1.00				
ABSVICE	.34*	.01	-.00	-.03	-.08*	.33*	1.00			
PCEP	-.05**	-.06**	.11*	.16*	.10*	.51*	.14*	1.00		
ATTVIL	-.03	-.02	.02	.08*	.03	.47*	.11*	.61*	1.00	
PARTVIL	-.12*	-.02	.06**	.11*	.18*	.20*	.14*	.27*	.17*	1.00

\*Significant at .01 level or better. 1-tailed test.

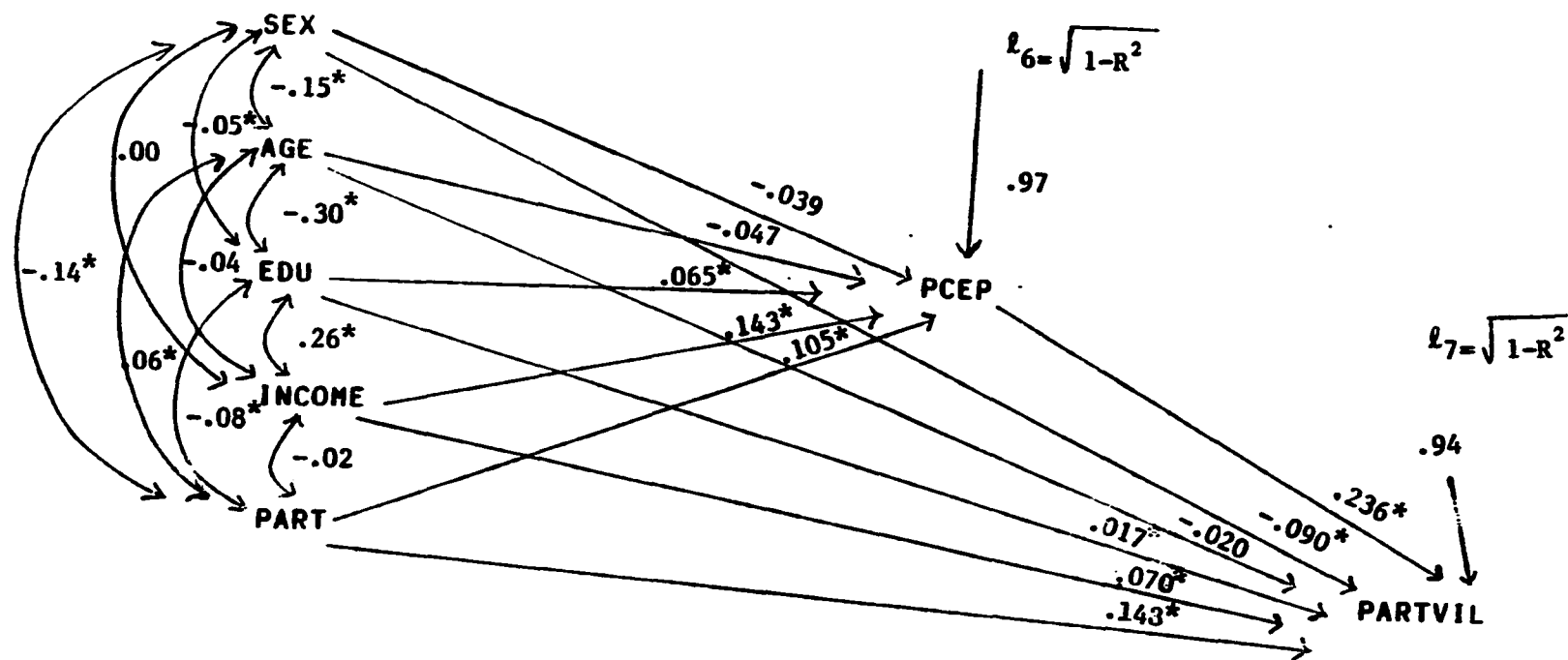
\*\*Significant at .05 level or better. 1-tailed test.

abstinence from vice are confirmed. Moderate intercorrelations were also found among orientation to the situation variables.

Of special interest is the issue of multicollinearity. The bivariate correlation analysis reveals that none of the correlations between any two variables was at or above the threshold level ( $r=.8$ ) for multicollinearity (Nie et al., 1975).

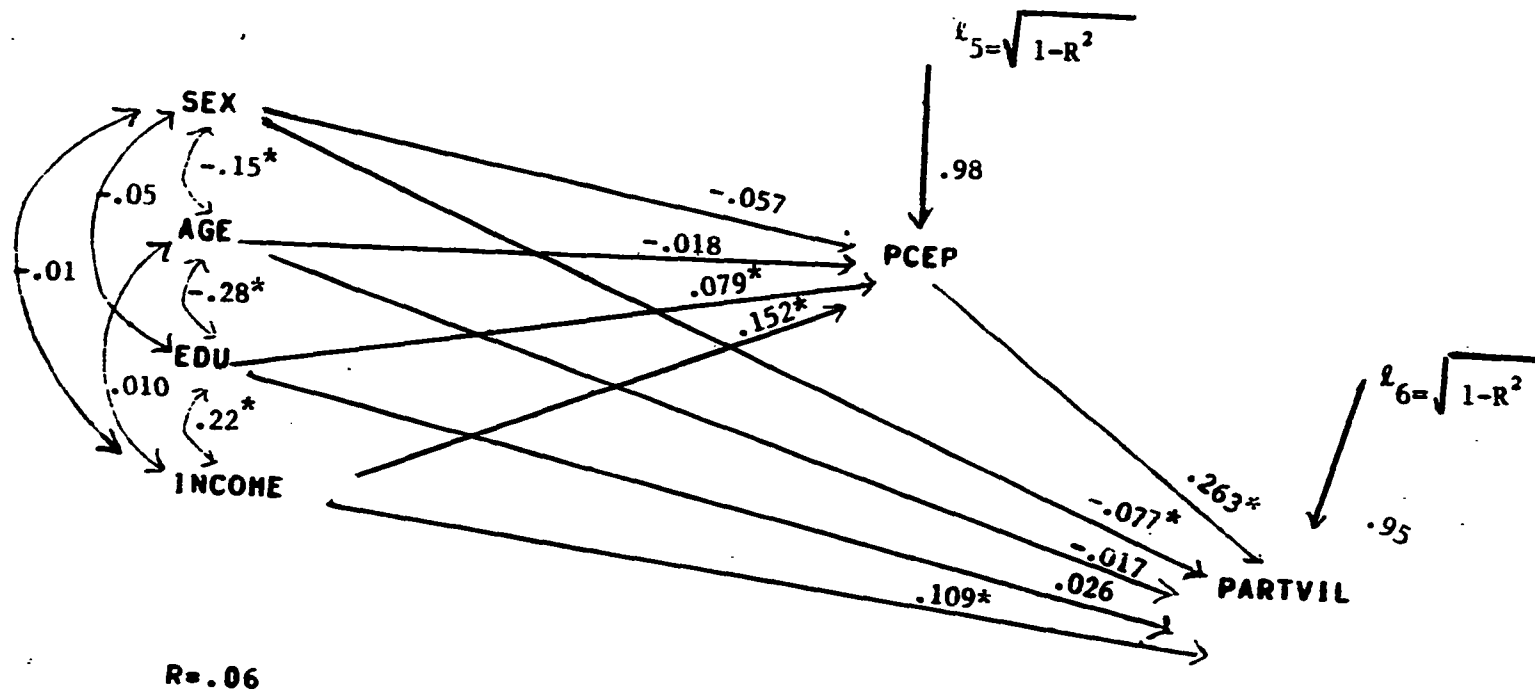
#### Path Analysis

The purpose of this section is to identify causal relationships between participation in the VPL program and its goal, actual participation in village activities. At this stage, the whole models (Figures 5a-5c) were put together, controlling all relevant variables simultaneously and not collapsing variables into categories. Perception of the program (PCEP) is selected to represent orientation to situation in evaluating the causal model. According to the literature, favorable perception of the program is the most important factor predicting success of the program (Clark and Akinbode, 1968; Rogers and Shoemaker, 1971; Rogers, 1983). In our situation, perception of the program is the orientation-to-situation variable that is most strongly related in a positive direction to participation in the VPL program ( $r=.10$ ) and participation in village activities ( $r=.27$ ).



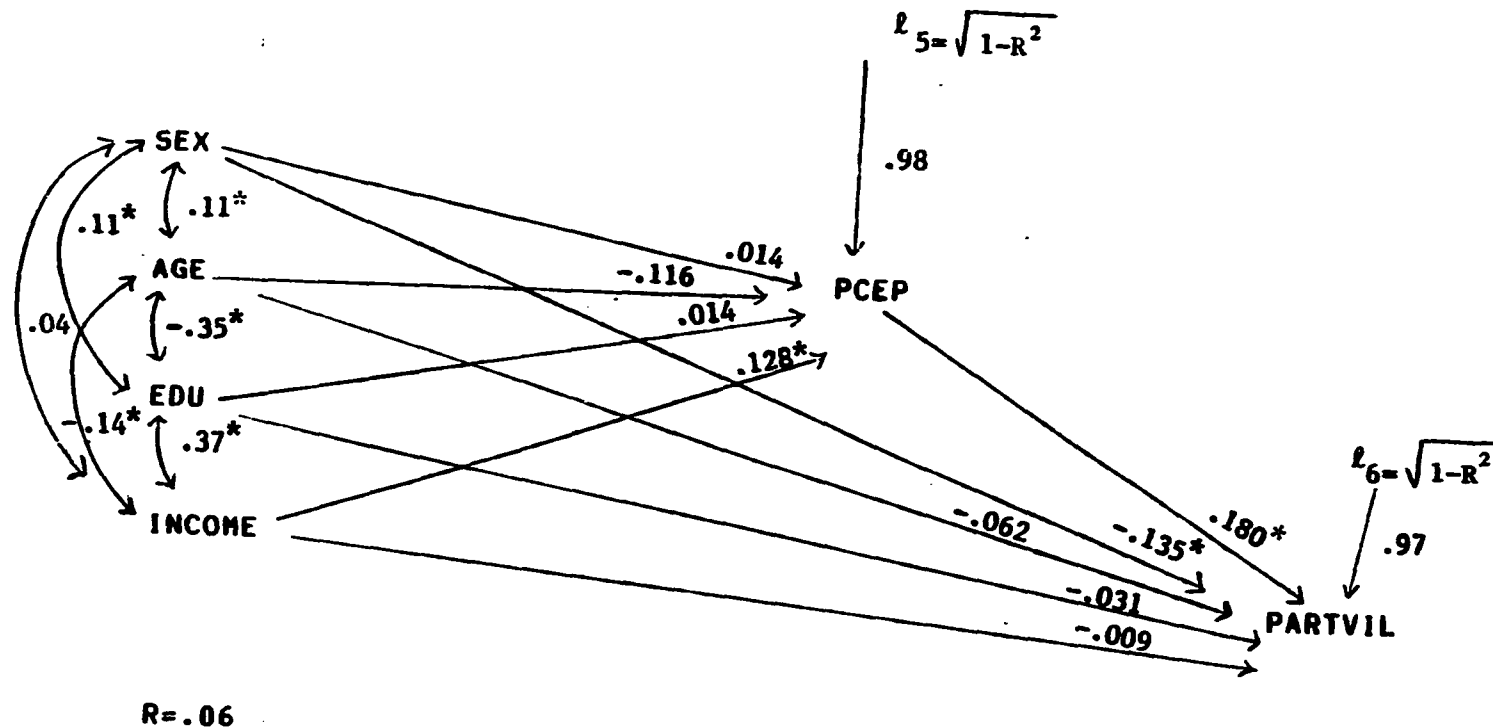
\* Significant at .05 level or better.

Figure 5a. Path Model Predicting PARTVIL - All respondents (N=1,084)



\*Significant at .05 level or better.

Figure 5b. Path Model Predicting PARTVIL  
Participants in VPL program (N=801)



\*Significant at .05 level or better.

Figure 5c. Path Model Predicting PARTVIL  
Nonparticipants in VPL Program (N=283)

Findings in this section are divided into two subsections. In the first subsection, causal relationships between the situation of action (participation in the VPL program, PART, perception of the program, PCEP), and the goal (participation in village activities, PARTVIL) are presented and discussed. In the second subsection respondents are divided into two groups, participants and nonparticipants in the VPL program (see Figures 5b-5c). Comparisons are made between participants and nonparticipants on perception of the program (PCEP) and participation in village activities (PARTVIL).

For both sections, the correlation matrix, from the uncollapsed data, provides the input for the path analysis (see Appendix B). From the tables, the highest correlation between any two variables was .37 (correlation between education and income for the nonparticipants' model); most were below .20. With correlations this low, multicollinearity does not appear to be a problem. The results of both causal relationships are presented in Table 7 and Table 8, respectively.

#### Model 1: The respondents' model

The effects of the respondents' characteristics and participation in the VPL program (PART) on perception of the program (PCEP) and participation in village activities (PARTVIL) are provided in Table 7. The results suggest that

respondents' levels of education and income have significant positive direct effects on perception of the program. This also implies the importance of improving these two factors in order to encourage villagers' perception of the program. Although sex has no effect on perception of the program, it shows a negative direct effect on participation in village activities. Respondents' level of education and income shows a positive direct effect on participation in village activities. Respondents' level of income also shows a relatively strong indirect effect through perception of the program. This finding corresponds to past research showing a positive relationship between income and participation in change program. Participation in the VPL program (PART) shows a significant positive direct effect on perception of the program.

At the same time, perception of the program shows a rather strong positive direct effect ( $B=.24$ ) on participation in village activities (PARTVIL). This indicates that encouraging villagers' favorable perception of the program would have an impact on promoting their participation in village activities. Of special interest is the significant positive direct effect ( $B=.15$ ) of participation in the VPL program (PART) on participation in village activities (PARTVIL). This suggests that while participation in the VPL program (PART) has direct impact on participation in

Table 7. Direct and indirect effect of causal relationship between respondent characteristics, participation in VPL (PART), perception of the program (PCEP), and participation in village activities (PARTVIL)

Dependent V	Independent V	Total	Effect	
			Direct	Indirect
PCEP	SEX	-.039	-.039	-
	AGE	-.047	-.047	-
	EDU	.065*	.065*	-
	INCOME	.143*	.143*	-
	PART	.105*	.105*	-
PARTVIL	SEX	-.099*	-.090*	.009
	AGE	-.031	-.020	-.011
	EDU	.033*	.017*	.016
	INCOME	.104*	.070*	.034
	PART	.173*	.148*	.025
	PCEP	.236*	.236*	-
$R^2 = .08$				

\*Significant at .05 level or better.



village activities, it also has an indirect effect through perception of the program.

Model 2: Models for participants and nonparticipants

Table 8 provides a comparison of the effects between participants' and nonparticipants' characteristics on perception of the program and the goal of participation in village activities. The results suggest that among participants the level of education and income have a significant positive direct effect on perception of the program. This implies that success in encouraging villagers' favorable perception of the program would depend on increasing villagers' level of education and income. Participants' sex has a negative direct effect, while their level of income shows a positive direct effect on participation in village activities (PARTVIL), an indication that male and higher income participants benefited more from the VPL program.

Among the nonparticipants, only income shows a positive direct effect on perception of the program. For nonparticipants, sex shows significant direct effect on participation in village activities which is congruent with the previous findings indicating that women tend to dominate domestic activities, while men are more likely to participate in village improvement activities.

Of special interest is the strong positive direct effect of favorable perception of the program (PCEP) on

Table 8. Direct and Indirect effect of causal relationships between respondent characteristics, perception of the program (PCEP), and participation in village activities (PARTVIL)

Dependent V	Independent V		Total	Effect	
				Direct	Indirect
PCEP	SEX	Participants	-.057	-.057	-
		Nonparticipants	.014	.014	-
	AGE	Participants	-.018	-.018	-
		Nonparticipants	-.116	-.116	-
	EDU	Participants	.079*	.079*	-
		Nonparticipants	.014	.014	-
	INCOME	Participants	.152*	.152*	-
		Nonparticipants	.128*	.128*	-
R <sup>2</sup> =.06					
PARTVIL	SEX	Participants	-.089*	-.077*	-.015
		Nonparticipants	-.133*	-.135*	.002
	AGE	Participants	-.022	-.017	-.005
		Nonparticipants	-.083	-.062	-.021
	EDU	Participants	.047	.026	.021
		Nonparticipants	-.029	-.031	.002
	INCOME	Participants	.149*	.109*	.040
		Nonparticipants	.014	-.009	.023
	PCEP	Participants	.263*	.263*	-
		Nonparticipants	.180*	.180*	-
R <sup>2</sup> =.06					

\*Significant at .05 level or better.

participation in village activities (PARTVIL) for both participants ( $B=.26$ ) and nonparticipants ( $B=.18$ ). This suggests that promoting villagers' favorable perception of the program would help to increase their participation in village activities. However, since perception of the program shows strong positive direct effect on participation in village activities for the nonparticipants too, it is very likely that there may be other competing factors besides the VPL program that affect villagers' perceptions and their participation in village activities.

Finally, the magnitude of  $R^2$  for the two models is small.  $R^2$  is 8 percent for the respondents' model, and  $R^2=6$  percent for both participants' and nonparticipants' models, respectively. Thus, there is a substantial proportion (more than 90 percent) of the variance of the dependent variables that is unexplained. Findings of this section need to be interpreted with caution. The small magnitude of  $R^2$  for both models indicates that the models do not fit the data very well. There might be other methodological problems concerning specification errors and measurement errors that need to be taken into consideration.

## CHAPTER VI. DISCUSSION AND CONCLUSION

This chapter has four sections. First, the effectiveness of The VPL program is discussed. Second, a critique of the research design developed by the NRC is presented. Third, policy implications of the study are discussed, and fourth, the study's limitations are examined and suggestions for further inquiry are made.

### Effectiveness of the VPL Program

In this section, the effectiveness of the VPL program in attaining its goal is examined. The discussion follows the propositions drawn from the theory of social action proposed in chapter III. The goal model and participant satisfaction model (Hall, 1982) are employed to examine the issue.

According to the goal model, effectiveness is defined as "the degree to which an organization achieves its goal" (Hall, 1982:278). In this study, the concept of goal may be considered on two levels. First, there is the program's goal of producing specific changes among participants of the VPL program in their level of mind purification, abstinence from vice, perception of the program, attitudes toward village improvement activities, and participation in village improvement activities. Second, there is the participants'

goal of satisfying personal needs by making the specific changes requested by the program.

For the goal model, the empirical evidence of goal attainment is indicated by participants' changes in attitudes and behaviors. According to the VPL program, the participants' level of mind purification, abstinence from vice, positive attitudes toward village activities, and actual participation in village activities indicate program effectiveness.

The goals of the participants are better explained by the participant satisfaction model. According to this model, effectiveness is a function of individual or group judgments about the quality of the program (Hall, 1982). In this model, the program's success is viewed not in terms of goals being achieved but rather in its capacity to provide sufficient rewards or incentives so that participants are motivated to continue their involvement. Rewards do not need to be monetary. They may be tangible or intangible. From this perspective, the effectiveness of the program is measured by the extent to which participants perceive themselves free to use the program (or activities of the program) as an instrument for their own ends. In summary, the greater the degree of perceived program instrumentality of each participant, the more effective is the program (Hall, 1982).

Evidence of effectiveness, according to the participant satisfaction model, includes participants' continued support of program activities through favorable perceptions of the program (its worth and consequences), continued participation in the program activities (e.g., participation in village activities), and encouraging others to participate.

Drawing from the theory of social action, it is proposed that the goals of the VPL program are accomplished when the program has a direct effect upon villagers' orientation to situation, the program has a direct effect upon villagers' ultimate action (participation in village activities), and villagers' orientation to situation has a direct effect upon villagers' ultimate action or goal (participation in village improvement activities).

The first goal of the VPL program seems to be attained since the path analysis results indicate a significant positive direct effect of participation in the VPL program on villagers' orientation to situation represented by perception of the program. However, there are several questions to be answered before one can be certain that the first goal of the VPL program was fulfilled. Is this goal really attained or is it a result of response set bias? Are there any specification errors and/or measurement errors as reflected in the low magnitude of the  $R^2$  of the models that need to be taken into consideration?

For the second goal, the results of the path analysis also indicate a positive direct effect of participation in the VPL program and participation in village activities. According to the participant satisfaction model, this finding provides evidence of program effectiveness. That is, participants in the VPL program have high participation in village activities, indicating that they find participation in both the VPL program and in village activities rewarding. This means that participants perceived their participation in these activities as an instrument for their own ends (e.g., better living conditions). However, this effectiveness needs to be interpreted with caution. For people not only consider what they would gain if they participate in any activity but also consider what the cost would be if they do not. Homans (as quoted in Wilson, 1983:20) points out that the cost of something "is the foregone reward of an alternative action not performed." In the rural Thai community, patriotic duty and fear of authority are strong motivations. These two factors make villagers well aware that they may not gain much by participating in governmental village development programs, but they would lose even more if they do not participate. Hence, the motivation for participation may be suspect.

Regarding the third goal of the program, the results of path analysis indicate that villagers' orientation to situa-

tion, represented by perception of the program, has a direct effect on villagers' participation in village improvement activities. This indicates that participants perceived the program to be rewarding and consistent with their needs and interests. However, when one takes a closer look at the data, this interpretation is problematic. Among the participants, the result of path analysis suggests that only participants with higher levels of education and income would perceive the program as favorable. Also, the program convinced more males and villagers with higher levels of income to participate in village activities. This again indicates that only certain groups of villagers perceived the village activities of the VPL program as of benefit to them. Rossi and Freeman (1982) point out that the effective programs are the ones that produce the greatest impact on the greatest target. According to this, the third goal of the VPL program was not fulfilled.

This raises the question of how to increase the VPL program impact on villagers, no matter what their personal characteristics. Rossi and Freeman (1982) found that a large proportion of the interventions that fail to show impacts can be attributed to two important factors: the wrong intervention is delivered, or the intervention is delivered in a way not specified. These two factors lead to two important considerations. First, a needs assessment



should be conducted before instituting any program to assure that the proper program is to be delivered. Second, accuracy in implementing the program should be a major concern of the implementor to ensure that the program attains its goal.

### Needs assessment

Kimmel (1983:290) defined needs assessment as an act of estimating, evaluating, and appraising a condition in which something desirable is required or wanted. It is a process of creating a priority listing of needs. According to him, once these listings have been created, such information will permit decision makers to plan and manage resources and programs more effectively, as well as to formulate more significant, long-range policy initiatives. Kimmel (1983) suggests multiple methods of needs assessment. His methods are eliciting opinions or judgments of needs from a variety of sources, collecting data directly from the field (e.g., from villagers through a field survey), inferring needs from indirect indicators (e.g., social indicators), and inferring needs from the secondary analysis of existing data (e.g., utilization of data already collected on the use of services in existing programs).

In most developing countries, rural community development programs are planned by a central authority with almost no input from villagers (Markham, 1967; Heyer, 1981; Nagal

and Schubert, 1981). Programs are planned with little regard for villagers' needs and interests (Mosha, 1982), their varied backgrounds, the availability of local resources, and the accumulated stock of local knowledge (Wilson, 1977; Birimini, 1981; Gibbons and Schroeder, 1983; Mulusa, 1983).

There is evidence from several studies in other parts of the world that supports the notion of needs assessment before instituting any development for villagers. Moland (1981) ascertained that villagers differ in their problem identification and these differences need to be kept in mind before planning any program for them. Four studies in Tanzania (Francke, 1974; Ritchie, 1977; Moland 1981; Gonsalves, 1984), and others in Iran (Ashraf, 1978), Nigeria (Onuoha, 1978), India (Hess, 1980), and Kenya (Ngesa, 1985) reported developing training programs for villagers from needs assessment. These researchers found that rural community development programs with content relevant to villagers' needs are most likely to be successful. Young (1982) also notes that program based on villagers' needs and local resources are the most effective.

At the policy making level, needs assessment enhances cost-effectiveness by increasing the possibility that scarce financial resources will be expended wisely, making additional funds available for other rural development projects.

A needs assessment will provide information for the government to develop the right programs for villagers. Needs assessment will also encourage participation of citizens in expressing their own needs and interests to decision makers. The success of rural community development programs is a function of two-way communication, an integrating element of top-down consideration and commitment and bottom-up participation and control of the decision-making process (Davies, 1980; Fortmann, 1980; Moris 1981; USAID, 1981). Moreover, citizen participation will enhance villagers' capacity to sustain and accelerate the pace of their own improvement and be able to maintain that development even after the improvement has already occurred (Abasiokong, 1982). In Thailand, this is a new process and has yet to be used extensively.

#### The implementation of the program

The effectiveness of the VPL program is very much dependent on its ability to transform inputs into outputs. In more specific terms, the VPL program is an attempt at transforming an abstract input, Buddhist doctrine, into concrete output, an increase in villagers' participation in village improvement activities. In this process, the role of governmental change agents and the Buddhist monks who perform the program process is very essential.

Of special interest is the role of the Buddhist monks who are employed by the program to educate villagers on mind

purification and abstinence from vice. Ladewig (1984) points out that change agents' performances in carrying out the program process contribute to a more accurate appraisal of program impact. Iwueke and Findlay (1980) state further that the success of the change agents (which often is success of the program) is dependent on the type and intensity of the methods they use to pass information to villagers. They suggest that the performance of change agents needs to be evaluated. In our situation, a measure of villagers' perceptions of the performance of both change agents and Buddhist monks should be included for an accurate measure of the effectiveness of the VPL program. However, the performance of government change agents and Buddhist monks has never been evaluated in rural Thailand. Generally, criticism of governmental changes agents seems to be unlikely, and criticism of Buddhist monks is considered a sin.

The issue of how to gain honest information from villagers on this concept is very essential. One possible way is to do it through a needs assessment. This can be done by asking villagers (or using a village committee as a representative of villagers) to list services/activities that they have already received from the governmental change agents and Buddhist monks. Then they will be asked to list additional services/activities that they want change agents

and Buddhist monks to work on for their village. These methods will help gain honest information from villagers without making them feel that they are criticizing governmental change agents or Buddhist monks who are highly respected among them.

#### A Critique of the NRC Research Design

In this section, a critique of the proposed research design developed by the NRC is presented. The critique will include comments on the design, sampling procedures, sample, measurement of the variables, reliability and validity of the data, and data collection.

##### The research design

The design proposed by the NRC was cross-sectional. A cross-sectional design is a correlational design in which all measures are taken at one point in time (Spector, 1981). According to Bailey (1982), a cross-section means a broad sampling of persons of different ages, different educational and income levels, different races, and different religions. The strategy employed by the NRC under this design is a strategy in which only post intervention measures are used (Rossi and Freeman, 1982). The strategy permits post hoc comparisons between participants and nonparticipants in the VPL program. Comparability between the two groups is

established by holding relevant factors (e.g., preintervention factors) statistically constant.

Generally, an intervention's effects are assessed to determine whether the intervention produces more of an effect or outcome than would have occurred either without the intervention or with an alternative intervention. The outcomes of an intervention are assessed by comparing information about participants and nonparticipants before and after an intervention. According to Rossi and Freeman (1982), a randomized controlled experimental design is the best research design for assessing the net impacts of an intervention. The design contains high internal validity. Internal validity of a design refers to its capability, through derived data, to make definitive statements about whether the program produced the net intervention outcomes (Rossi and Freeman, 1982). The design rules out extraneous causes of the effects and offers greater assurance that the intervention was the cause of the difference noted between experimental and control groups. However, randomized experimental design is not always possible in research involving nonlaboratory studies like the ones in social science. Not all social policies and programs are amenable to randomization and experimentation. Social, political, and ethical considerations may also prevent experimentation (Nachmias, 1979).

For an ex post facto study like the NRC study, researchers were not able to manipulate the independent variable. Nor was premeasurement of participants and nonparticipants possible. Under these circumstances, a cross-sectional study design, with comparisons between participants and nonparticipants and using statistical controls, seems to be the most appropriate (Rossi and Freeman, 1982).

Rossi and Freeman (1982) indicate several advantages to using a cross-sectional study. First, the approach is useful in a situation where attaining both before and after measurements of the control and experimental groups is not possible. Second, the cross-sectional study can be accomplished quickly and is, therefore, a cost-effective method for estimating a program's impact. Finally, under circumstances where randomized experiment and quasi-experiment are completely out of the question, cross-sectional study is the only approach to assess the program's effects.

However, there are several limitations of using cross-sectional data in this study. First, the study of changes in participants' and nonparticipants' behavior due to the VPL program is not fully possible, because the program provides only post-program comparisons. Data collected at only one point in time offer no way to study trends and no way to tell whether a relationship found between participation in the VPL program and the dependent

variables will remain the same or will change with time. This situation is serious, especially for the study of change in behavior such as abstinence from vice. Data collected at more than one point in time would be more appropriate to determining villagers' levels of abstinence from vice due to the VPL program.

Second, the data were collected after the program had been established. Manipulation of variables was not possible, thus making generalization of findings to larger populations rather questionable because of lack of control of extenuating variables. Also, the nature of cross-sectional survey data makes it difficult to identify the causes and effects of the variables under investigation. Relationships among variables do not necessarily mean causation.

Third, a cross-sectional study relies heavily on prior knowledge of the processes involved, especially when the analysis involves statistical controls. The process depends on theory to provide information to indicate what pre-intervention factors (such as sex, age, education, income) will account for the variation in the dependent variables and thus need to be controlled to reduce the residual variation.



Fourth, cross-sectional data are vulnerable to a problem such as specification. Specification errors include problems committed in specifying the model to be tested. The model used is actually a representative of the theory that generated it. When the model is not tenable from a theoretical frame of reference, specification errors have been committed. Among such errors are omission of relevant variables from the model, inclusion of irrelevant variables in the model, and postulating a linear model, though a nonlinear model is more appropriate (Pedhazur, 1982). In our situation, an omission of relevant variables from the model is at issue. The omitted variables may be correlated with the variables studied. They may also be subsumed under residuals (unmeasured or unknown factors that effect the dependent variables). Thus, it is possible that residuals and independent variables are correlated. This could lead to erroneous conclusions about the effects of the independent on the dependent variables. Specification errors are reflected in the small magnitude of explained variance in the path models of this study. Indeed, more than 90 percent of the variation in the dependent variables remain unaccounted for.

#### Sampling procedures and the sample

The NRC used a purposive sampling technique in selecting regions and provinces for the study. In purposive

sampling, the researcher uses personal judgement as to which respondents to choose and then picks only those who will meet the purpose of the study (Bailey, 1982). The NRC selected regions and provinces by an expert choice (Kalton, 1983). In this method, a "representative" sample is selected by an expert who is knowledgeable in the subject matter to be studied. Purposive sampling is thus a nonrandom technique. Because each element of the sample does not have an equal chance of being included in the sample, precise estimates of the sample's estimation cannot be made. Thus, it is a weak technique. However, despite its theoretical weakness, purposive sampling, like other nonrandom sampling techniques, are widely used in practice, mainly for reasons of cost and convenience (Kalton, 1983).

The NRC researchers did not mention the criteria for choosing the regions. Brara (1983) indicates several biases which impede researchers in conducting research in (or about) developing countries. One is what he calls a spatial bias. This means that often areas are selected for the study because they offer convenient transportation, a nice location, or even a good place for a "long vacation" (Brara, 1983:21). In Thailand, the public transportation connecting the four regions of the country are in good condition. However, each region has its unique advantages. In the north, the country is famous for its beautiful mountainous

scenery and nice whether all through the year. The south is famous for its beautiful seashores. Good accommodations are available in both regions. Thus, it is not surprising that these two regions are often included in studies conducted by Thai researchers.

In each region, the province with all of its villages in the VPL program was selected for the study. This means that only one province in each region was selected while other provinces in the region did not have a chance to be included in the sample. This purposive choice affects the representativeness of the sample. The researcher cannot be sure that the population of the selected provinces adequately represents the selected regions. In addition, this method causes a problem of self-selection, which is one threat to the external validity of the study. External validity refers to the ability of a research design to allow for generalization to be made about the effects of the study beyond the specific groups and content being tested (Rossi and Freeman, 1982). An important consideration for a research design is to be certain that the targets selected from the population form an unbiased population. According to Campbell and Stanley (1963), self-selection causes an interaction of selection and treatment which jeopardize the representativeness of the sample. In the VPL study, the researchers selected only the provinces that were already

active in the program. No concern was given to the main effect of the provinces themselves, which may have caused the VPL program to be more effective than in the larger population.

The self-selection process also affected the research design of the NRC. The study only compared participants and nonparticipants from villages that participated in the VPL program. All respondents were from villages that were exposed to the treatment (the VPL program), with some choosing to participate in the program and some not. It is likely that the study had no pure control group (the villages that were not exposed to the VPL program). The effect of the VPL program would be more meaningful had the comparison been made between respondents from villages exposed to the VPL program with respondents from villages that were not exposed. Campbell and Stanley (1963) point out that a comparison of experimental groups with total absence of a control group gives almost no scientific value, for there is no way to figure out what the data would have been had the treatment not occurred.

Criteria for selecting districts and subdistricts were set to save time and money for travelling costs. Brara (1983) calls this situation a gathering of roadside information. He says that hazardous roads, uncomfortable sleeping accommodations, and a shortage of both time and fuel often

dictate that researchers gather roadside information. Thus, study districts and subdistricts that are farther away and offer fewer accommodations are invisible and have no chance to be selected.

Villages were selected according to household numbers. For a village to be selected, it had to have at least 100 households for researchers to sample at least 70 households per village (NRC, 1986a). Thus, smaller villages had no chance of being included in the sample. In addition, it was reported that villages selected for the study that could not be accessed by walking were not visited by interviewers (NRC, 1986a).

These purposive choices, though they help researchers save time and money, jeopardize external validity of the sample because a biased sample of the population may be selected. Thus, researchers cannot be sure that the effects of the VPL program can be generalized to a larger population. A better sampling technique should be used to make the sample more representative. In a homogeneous population, like rural Thai villages, to save time and money, the researchers can reduce the sizes of their district, village, and household samples in order to have more funds for accessing more distant elements in case they are in the sample. The multistage random sampling used by the NRC in selecting villages within subdistricts and districts is

still appropriate. In selecting regions, if a researcher can conduct a study in only one or two regions, it is acceptable to select regions by expert choice (Kalton, 1983). However, in selecting provinces, districts, sub-districts, villages, and households, careful systematic random sampling should be used in each step to give all members of the population the chance to be selected. This should be done with no difficulty because all lists of provinces, districts, subdistricts, villages, and households are available at the Ministry of Interior Defense and its branch offices in each region. In a study where all the sampling frames are available, systematic random sampling is an appropriate way to help reduce bias (Scheaffer et al., 1979).

Finally, it was reported that by the time of data collection, most selected household heads were busy with their farm work because it was the farming season (NRC, 1986a). Other adult villagers who were available at home were substituted. These adults mostly are the wives or older relatives who usually do not work in the fields. These people have more time to participate in the VPL program and other village improvement activities. Thus, it is likely that the relationship between participation in the VPL program and participation in village activities from the findings could have been influenced by the timing of data

collection. In order to avoid this situation, it would be more appropriate to collect data after the farming season is over. This would allow the selected household heads the chance to be interviewed. Also villagers have more time to participate in village improvement activities after the farming season. Thus, besides conducting an interview, researchers would have an opportunity to make observations about village improvement activities. In this situation, a triangulation can be employed. The purpose of triangulation is explained by Denzin (1978) and Bailey (1982) as a process which tries to corroborate information by comparing the results of two or more methods. Observation is one method which may be used to supplement other methods. According to Bailey this method will enhance the accuracy of the data. Observations will also provide information that could not be attained by a structured questionnaire or an interview.

#### Measurement of variables

Carmines and Zeller (1979:10) define measurement as a "process linking abstract concepts to empirical indicants." Under this definition, the measurement process involves both theoretical (unobservable/unmeasurable) concepts as well as empirical (observable responses) components. Measurement focuses on the relationship between the two.

There are two basic properties of empirical measurement: reliability and validity of the indicators

(Carmines and Zeller, 1979). Lack of validity and reliability reflects measurement error or failure to collect the data accurately. Unreliability is related to the amount of random error, while invalidity depends on the extent of nonrandom error (Carmines and Zeller, 1982). Generally, invalidity ensures lack of reliability since the latter is dependent upon the former. Rossi and Freeman (1982) point out that in measuring the impact of any program, the measures must meet the requirements of both validity and reliability.

Validity concerns the relationships between concepts and indicators (Carmines and Zeller, 1979). It is the extent to which the measure measures what is intended and presumed to measure. Phillips (as quoted in Bailey, 1982) points out that a measurement of a phenomena (as designed by a given concept) is viewed as valid if it successfully measures the phenomenon. Bailey (1982) describes validity as having two parts: that the measuring instrument is actually measuring the concept in question and not some other concept and that the concept is being measured accurately.

There are several kinds of validity. However, in measuring any program's impact, face validity is a priority (Patton, 1982). Face (or content) validity concerns the extent to which an empirical measurement reflects a specific



domain of content (Carmines and Zeller, 1979). Sellitz et al. (as quoted in Bailey, 1982) note that face validity deals with relationships between theoretical and empirical concepts and that ultimately it is a matter of judgment.

One of the major causes of the lack of face validity is the construction of ambiguous concepts and a poor definition of concepts (Bailey, 1982). In order to assess the face validity of the measures, a researcher usually consults a number of specialists as well as thoroughly explores the available literature to reach an agreement on concept definition and the particular content domain of the concepts (Carmines and Zeller, 1979; Bailey, 1982). In this study, items measuring each concept were selected by consulting the literature pertinent to the concepts to assure that the constructed items really measure the kind of behavior under investigation (Bailey, 1982). In our situation, a measure of perception of the program seems to contain high face validity. This is because, according to Patton (1982), the index covered most of the dimensions of perception of the program. The items selected for the index are aimed at finding out what people think about various aspects of the program. That is, the index is composed of items reflecting villagers' goals, intentions, desires, and values about the program, which is the most essential information for measuring perception of the program.

The measure of abstinence from vice is more complicated. The data collected by the NRC are composed of categories on cigarette smoking, intoxicant/liquor taking, buying underground lottery tickets, gambling, and drug abuse. Construction of these categories rested on the subjective assessment of the NRC researcher because there is little literature dealing with the definition and content of abstinence from vice. It is more likely that some researchers would include other activities in these categories (e.g., sexual misconduct). It is also possible that some other researchers may not include cigarette smoking as a vice. Due to this limitation, it is possible that the measure of abstinence from vice may not cover all dimensions of its content.

The measure of attitudes toward village activities is also problematic. When taking a closer look, the items measuring these attitudes developed by the NRC are more appropriately the measures of cooperation in village activities rather than a measure of villagers' attitudes toward them.

The situation is the same for the measure of mind purification. Generally, mind purification is a broad and abstract concept. Carmines and Zeller (1979) note that assessing face validity is more difficult when dealing with abstract concepts. In our situation, there is no consensus

on the definition and content domain of mind purification. Indeed, the items measuring mind purification developed by the NRC may be more a measure of villagers' discipline rather than a measure of their attitudes toward virtue and vice. According to Bailey (1982), if the measure clearly measures other concept, then obviously it does not have face validity. Thus, it is possible that the measures of abstinence from vice, mind purification, and attitudes toward village activities in this study may contain relatively little face validity. However, it should be noted that lack of face validity of the measures is not an obvious situation in measurement. As Bohrnstedt (as quoted in Carmines and Zeller, 1979) notes, there is no rigorous way to access face validity. Bailey (1982) also points out that face validity is the most difficult validity to verify in the course of actual field research.

Reliability focuses on a particular property of empirical indicators (Carmines and Zeller, 1979). According to them, reliability concerns the degree to which results are consistent across repeated measurement. The reliability of the measure relies on the performance of the instrument itself. The instruments (indices for measuring attitudinal variables) selected for this study are composed of items that gave the highest reliability. The index of perception of the program, attitudes toward village

activities and mind purification have Cronbach's alphas of .78, .68, and .58, respectively. The somewhat lower reliability of the indices of attitudes toward village activities and mind purification may be due to the lack of face validity of the indices which affect their reliability.

Carmines and Zeller (1979) point out that any measuring instrument is reliable if it is minimally affected by chance factors and disturbance. Usually, the chance disturbance can occur at several stages of the survey, especially at the stages of questionnaire construction and data collection.

At the stage of questionnaire construction, the poorly worded questions in the questionnaire can cause unreliability (Bailey, 1982). In our situation, the questions measuring behavioral variables, such as abstinence from vice and participation in village activities, open the way for bias. This is because the questions are written in a way that may force people to answer in a particular direction. This may make people not give their actual position on the issue under investigation (Bailey, 1982). For abstinence from vice, the question asked may make people lose face, as well as feel that they may be perceived as not good Buddhists if they answered that they have not decreased or given up the vice. For items possibly influenced by the social desirability of responses, careful ordering of the questions and wording is needed. Thus, instead of asking them if they

have decreased or given up the vice activities, it is more appropriate to ask for factual statement such as: How often do you take intoxicants/liquor per week? Responses could include none, once a week, twice a week, and more than twice a week. This factual statement may help researcher gain more honest information from villagers.

The question on participation in village activities also may have forced villagers to respond in a particular direction. Villagers would again lose face if they report that they did not participate in village activities. It is also possible that they report that they participated out of fear of authority. Again, in order to avoid this situation, filter questions are needed.

Despite these limitations, the questionnaire constructed by the NRC was, in general, well-written and relevant to villagers' characteristics, especially their level of education. This helped them to better understand the meanings of the questions and to be more cooperative, which was reflected in that there were no missing cases of the data. However, having no missing cases can lead to other questionable factors that effect villagers' responses that need special attention.

#### Data collection

The data were collected by interviewer teams sent out by the NRC (NRC, 1986a). Each year the office of the NRC

offers two training courses in research methods to governmental officials from 40 offices all over the country. Each class lasts for four months. Each group of the trainees (generally containing 40 people) are sent out to collect data in the field survey as part of their training. The topic of the survey is selected by the NRC. Though guided by an expert who is in charge of data collection, the interviewers had no prior experience in interviewing.

Bulmer (1983) points out that some of the most important factors affecting the interview are likely to occur during the data collection process. He indicates three factors affecting interviews, especially ones conducted in developing countries: how research is presented to respondents, respondents' perceptions of the interview, and the interaction between respondents and interviewers.

According to Bulmer (1983), if these three factors are of major concern in developed countries, they are even more crucial issues in developing countries. The first factor deals with the role of social research in the country. In developed countries where the role of social science research is well-established and people are familiar with research results from the media, especially ones that benefit their living conditions, people are more likely to have some conception of research. This is in contrast to a developing country like Thailand where social research is a

new phenomena. Thai people, especially rural villagers, tend to perceive social research as a mandate from the authorities. This perception leads to the second factor, which concerns the perceived superior status of the interviewers, which in turn affects the third factor, the relationship between interviewers and respondents, which is a matter of status incongruency.

The interviewing team sent out by the NRC had several characteristics that may affect the reliability and validity of the resulting information. First, not only are they inexperienced, but they are also outsiders to the villagers. Generally, being an outsider in rural Thailand is not a problem, since villagers are not hostile to them. However, it does affect the resulting information; rural Thai villagers tend to give high courtesy to outsiders, especially if they are perceived as coming from a higher status or authority. Most important is that the interviewers are governmental officials, who in the eyes of villagers are sent from the government to observe and report their behavior. They are perceived as superior in terms of authority as well as of higher status, better educated, and with wider social experience. In Thailand, the norm is that people behave appropriately when they are in contact with another person. Thus, villagers who perceived themselves as belonging to a lower status give high degrees of courtesy to

interviewers who are perceived as belonging to a higher status. Mitchell (1983) called this a cultural response set bias that affects the resulting information from the interview. The more the interviewers are perceived as higher status, the more excessive is the courtesy respondents would provide to them. Villagers will tend to be highly cooperative as well as tend to not express their true feelings. They will be humble and tend to agree with interviewers in order to please them. They also would try to recognize what the interviewers want and then behave and answer the questions accordingly (Dixon and Leach, 1984; Mitchell, 1983).

Second, the interviewers were not only governmental officials, but they also were collecting data on a governmental program. Paternalistic attitudes toward the government are prevalent among rural Thai villagers. This attitude, along with the fear of authority, are reasons that make villagers' favor governmental programs. The same is true for questions dealing with attitudes toward village activities and participation in them. The villagers not only want to please the interviewers who are governmental officials, but they also want to protect themselves from any perceived punishment they might get if they fail to participate in the activities. They want the interviewers to see them as good citizens and report this to the government.



The situation is the same for concepts such as abstinence from vice and mind purification. It is possible that the villagers may try to answer the questions according to what they think they should do or be. For example, they may answer questions in a way that shows they are religious and strictly follow the precepts of the Lord Buddha though in fact they may not.

This bias leads to the problem of how to gain valid and reliable information from the interview. Despite limitations, using a structured interview along with the questionnaire is most appropriate for this study. This is because, though the literacy rate of the country is considered to be high (85 percent) (Keyes, 1987), the comprehension level of villagers has not reached the stage of reading and responding with accuracy to the meaning of the questions asked in the questionnaire. Secondly, it is important to note that transportation and postal systems are not sufficiently developed to facilitate the use of mail questionnaires. Thus, the interview seems to be the only alternative for data collection.

However, there are some possible ways to improve the information gathered from interviews for this study. These possible solutions include improving the quality of data collection by using well-trained interviewers. Mitchell (1983) notes that it is often difficult to learn how

well-trained interviewers are and how valid is the information they collect. Babbie (1973) points out the importance of interviewers in observing, asking, probing, and guarding against confusing questions. Well-trained interviewers will reduce problems listed by Bulmer (1983) which effect interviews. That is, they would know the nature of the survey and its ultimate purpose well enough to explain it to villagers. They would be able to assure villagers that their anonymity will be maintained so that they feel at ease in answering questions without fearing being reported to the government. Most importantly, interviewers will explain to villagers the importance of giving an interview and how their responses are essential for the survey (Babbie, 1973; Bailey, 1982). In interviewing, the trained interviewers will know how to ask probing questions without over- or under-motivating villagers. They would also know how to record the response without changing the answers to correspond to their expectations (Bulmer, 1983). Using well-trained interviewers will improve the accuracy of the information gathered for the study.

In order to gain more usable information from villagers, it is appropriate to use more factual questions. Thai rural villagers are not accustomed to expressing themselves. When asked for their opinion, rural villagers try to agree with the interviewers or try to answer questions consistent

with community norms. This situation is more likely to happen when the questions deal with concepts such as abstinence from vice and mind purification. Thus, researchers need to use more factual questions to gain information concerning these two concepts.

Having some unstructured interview time to gain additional information would be of some help. Unstructured interviews would be conducted in a manner similar to a general conversation with villagers on these issues. Phillips' suggestion (as quoted in Bailey, 1982) that there is no consensus on the norms governing the concepts being discussed applies to these conversations. Thus, unstructured interviews would help gain information that could not be accessed by a structured interview. Also, observation should be used to provide supporting evidence for information obtained in the survey. However, observation should be limited to those times in the investigation where the opportunity arises naturally (for example, observing villagers' frequency in going to the temple). Another example is to observe villagers at festival time to record their drinking or gambling behavior. Finally, researchers can observe villagers' participation in village activities to document their cooperation in community development.

The last suggestion deals with the problem of interviewers being outsiders who came into the village for only

five days to collect data (NRC, 1986a). This short period of time is not enough for interviewers to build rapport with the villagers, especially to make them feel at ease in answering questions on such sensitive topics as governmental programs or vice and mind purification. Dixon and Leach (1984) point out that from ten days to four or six weeks is the appropriate time to build rapport with respondents. The purpose of rapport is not to build primary relationships with the respondents but to make them feel enough at ease to express their true feelings on the questions under investigation (Babbie, 1973; Bailey, 1982; Dixon and Leach, 1984). Building rapport, however, is time consuming, and is difficult for survey being conducted with a limited budget.

In our situation, collecting data on the impact of the VPL program should be a continuous process. The data should be collected by change agents at the district levels during their regularly contacts with villagers. Using this strategy, villagers will not feel that these change agents are outsiders since they already come to the village often enough for villagers to feel at ease with them. Usually, change agents at the district level are from the same areas they work in or are there long enough to have indigenous knowledge about the area and the people. The change agents can also include local people on the interviewing team. Generally, villagers tend to be more reticent with change

agents or with helpers from the same areas, especially in expressing their true feeling on sensitive issues.

Change agents or governmental officials at the district level can also have more time to conduct observations along with an interview. Collecting data by change agents or governmental officials at the district level will also expand the data base of the country which is normally available only at the national or provincial levels.

#### Policy Implications

The purpose of this study is to provide information on the impact of the VPL program in order to improve the quality of policy decisions relevant to the program. An additional consideration is that the findings of this study may be used for other governmental community development programs in the future.

The findings suggest that the VPL program marginally helped to increase villagers' participation in village activities, the major goal of the program. However, special consideration should be given to determining whether the program should be continued and whether responsible budget allocation should be made for the program. Though the major goal of the program may have been satisfied, the subgoal of encouraging abstinence from vice was not fulfilled. This suggests that the strategy of the program in applying Buddhist ethics as a means to increase abstinence from vice

needs to be revised. Generally, application of religious doctrines to influence concrete behavior, such as abstinence from vice, or an abstract process, such as mind purification, is not easily done. The application of Buddhist doctrines for this purpose is no exception, although the program has been in operation for only one year. The promotion of abstinence from vice should be a continuous process and the main function of a formal education process throughout the country rather than the task of one governmental development program. In applying Buddhism for the goal of village development, a more practical strategy is needed. There is a need to blend Buddhist doctrine with fundamental development principles.

By using causal (path) analysis, the study revealed some factors for improving villagers' orientation and participation in village activities. Orientation to situation represented by perception of the program is a critical factor in improving participation in village activities. This emphasizes the important roles of change agents and Buddhist monks in encouraging villagers' favorable perception of the program. Perception is an important factor in predicting the success of the programs (Rogers, 1983).

The findings also support existing national policy in improving villagers' living conditions through persistent persuasion by change agents. There is a great concern that

extension services in developing countries are of a conventional type (Nagai and Schubert, 1981; Moris, 1981). For Buddhist monks, who work side by side with government change agents, it is necessary that change agents should guide them more in learning about the goals of government development programs as well as the knowledge and the underlying principles of the program. This knowledge will help improve their performance in passing on information to villagers, in carrying out the program activities in a more practical way, and in encouraging villagers' participation in improvement activities.

Education and income are also important factors in predicting villagers' perception of the program and participation in village activities. It is the long-term goal of the Thai government to improve villagers' education and income. This is because solving these critical problems of rural people means solving the developmental problem of the country (Myrdal, 1973). However, limited funds make it difficult to provide formal education in the rural areas. Also, its impact is lessened because education policy is formulated by decision makers who are positioned in the cities. As a consequence, formal education has had very little impact in improving the conditions of rural people.

Given these circumstances, providing nonformal education for villagers is essential. This can be in the form of

training programs that provide knowledge of immediate use to villagers (Francke, 1974). This training should include basic instruction in how to improve their living conditions and how to improve their agricultural products and income. It is through this nonformal education that rural people's creativity can be unleashed. As they become more conscious of their efforts, they will be more inclined to participate in self-help and development projects (Ahmed, 1980; Gibbons and Schroeder, 1983).

Although formal or nonformal education is aimed at increasing villagers' income, other factors along with education must be considered. Improvement of the country's road networks and better market systems to provide fair prices for rural products is required (Abasiokong, 1983). The government also needs to plan agricultural policies that decrease inequality in the distribution of rural-urban income and economic opportunities (Abasiokong, 1983).

Finally, sex is found to be an important factor in predicting participation in village activities. Results from the study show that female villagers participated less in the VPL program as well as in village improvement activities. Moris (1967), Boulding (1976), and Staudt (1979) point out that rural women in developing countries contributed most of the family labor, yet their potential has not been adequately utilized. In addition, they are less



educated. A national policy to include women in the development process is needed. Nonformal education programs, such as special training for women, are also required (Ritchie, 1977; Ssenkoloto, 1980). Special training programs will help women to learn basic knowledge to increase their agricultural production and income and, ultimately, to share in the benefits of development. Chaney et al. (1979) indicate that to involve women in the development process is not just solving women's problems, but it is solving developmental problem of the country itself.

Finally, in order to make the VPL program benefit villagers of all characteristics, needs assessment assuring that proper social developmental programs are delivered to villagers is needed. The needs assessment should be done at each regional level, since each region is different in resources and products. Thus, people's needs for particular development programs in each region may be different. The needs assessment will promote citizen participation as well as reduce the top-down oriented policy of the country. Under this approach, villagers' will be able to express their needs by listing their priorities to the decision-makers. For, as Jones and Pandey (1981) point out, citizen participation is not an end in itself, but the means to optimize the fit between programs, policies, and people's

needs through a redistribution of decision makers and resources.

#### Limitations and Suggestions for Future Research

The study has several limitations that need to be taken into consideration. With regard to the sample, the study selected only those provinces that had the largest number of the villages under the VPL program. Also, only districts and subdistricts that were not further than 70 kilometers from selected provincial and district centers were studied. Finally, only villages containing more than 100 households were selected and only households that were within walking distance were interviewed. These limitations affect the external validity of the study. Future research examining the impact of the VPL program should study provinces with a lower number of villages in the VPL program, and include smaller villages and more remote districts, subdistricts, and households in the sample. Comparison between villages that are exposed to the VPL program and villages that are not should be made. The contributions of the VPL program in each region can also be compared since each region is different in resources, income, and geographical factors.

The reliance on Buddhism as a unifying principle for community development programs has limited generalization to other research studying the effects of religious doctrine (e.g., the Puritan ethic) as a means for community develop-

ment. Such comparisons may be done, but researchers should be aware of several problems, such as difference in doctrine content and ultimate goals prescribed by each doctrine.

The cross-sectional nature of the data make it impossible to measure changes due to the VPL program. In measuring outcomes in behavioral relationships, it is difficult to predict long-run changes from the short-run indicators revealed by a single program (Cain and Hollister, 1972). Future research should use a longitudinal design to investigate the changes due to the program.

The impact of the VPL program was examined when the program had been in operation for only one year. As many schools of thought contend, programs usually take a longer time to show impacts or indicate that changes have taken place. This is especially so when considering changes to human living conditions. As a consequence, the results of this study should be utilized with caution. A follow-up study is suggested to better determine the long-term impact of the program.

The study did not control for the effects of other governmental development programs operating before or at the same time as the VPL program. There have been several governmental development programs aimed at encouraging villagers' participation in village activities. These programs have been conducted by the Department of Agricul-

tural Extension, the Community Development Department, and the Department of Public Welfare. The difference between these programs and the VPL program is that they do not apply Buddhism as a means for persuasion. The presence of these other programs raises questions as to whether improvement attributed to the VPL program is from the program itself or from other developmental programs.

Subjectivity may be seen as another limitation of this study. Data were gathered by governmental officials, and it is possible that the data were collected for the purpose of satisfying the decision makers who provided project funding. Subjectivity may also be an issue in utilizing the data for this dissertation. Since the original data were collected for purposes other than this dissertation, some of the definitions and the selection of items to measure the concepts in this dissertation may be different than original objectives of the NRC research team.

Evidence from the study provides further suggestions for future research. The explained variance was low for all models. This means that most of the variance remained unexplained. Measurement errors are largely responsible for these low values. However, it seems possible that they may also be due to specification errors, especially the exclusion of relevant variables (Pedhazur, 1982). More relevant independent variables should be included in the

model. First, perception of the performance of change agents and Buddhist monks should be included since they are important factors in predicting the perception of the VPL program, which in turn affects villagers' participation in village activities. It is also an important factor in predicting the success of the program. Second, respondents' prior experience in governmental development programs is another important variable to be included. Generally, respondents vary both in development prior to and subsequent to their participation in the VPL program. Some have been involved in other governmental development program before participating in the VPL program. These respondents brought their own interpretations of development issues and approaches to the VPL program. Their expectation of the program would differ from villagers who had no such prior experience.

Other control variables should be included in the design to guard against confounding factors that might effect the accuracy of the prediction. Nachmias (1979) notes that social action programs need to consider variables that represent community effects even though they are not the outcome of the program. For example, the socioeconomic level of the villages may be one important factor that effects the outcome of the program. Generally, villages with better infrastructures, such as improved roads or

regular postal service, may have a different response to the VPL program than villages without these advantages. In addition, villages with connecting roads to nearby towns are more likely to participate in a greater range of recreation activities, possibly increasing their level of vice. Regions might also be used as a control variable, since each has different resources and products that may affect their participation in governmental development programs.

Future research should pay particular attention to abstinence from vice. A closer investigation of the sociodemographic characteristics of villagers involved in such activities should be made. The result will help the government especially focus the content of the VPL program. The same process should be done for villagers with lower levels of education and income who, according to the findings, benefit less from the VPL program. Further study should be made to find those factors which will help vulnerable groups benefit the most from the program. The result will help the government to plan and implement the program in ways that make the program beneficial to villagers of all characteristics.

Finally, in examining the effectiveness of the VPL program, only the goal model and participants' satisfaction models have been applied. Future research should investigate the effectiveness of the program using some other

perspective. For example, a political economy perspective (Hasenfeld, 1983) may provide additional insights. Generally, governments, including the Thai government, must mediate between public and private interests in the distribution of political and economic power and resources. This political and economic context pressures the government to be accountable for expended resources, especially when these resources are scarce, and to pay particular attention to the costs and benefits of its activities. However, doing a cost-benefit analysis of a social action program is more difficult because the outcomes are difficult to prescribe in monetary terms. Future study of the VPL program should include cost-effectiveness analysis. This method allows comparison and rank-ordering of the program activities as they relate to the efficient use of various inputs required to attain different levels of goal achievement (Rossi and Freeman, 1982).

#### General Conclusion

The VPL program contributed little of substantive significance to the orientations and behavior of the villagers. Thus, changes that did take place may have occurred with or without the program. Almost 60 percent of the respondents reported no prior involvement in vice activities. Hence, the program may have been planned to solve a problem that did not exist for a majority of the people.

Most important, the program made little contribution toward increasing villager participation in community activities, which was the main goal of the program. The analysis indicated that village participation levels did not substantively differ between those who did and did not participate in the program.

Several changes are needed in the VPI program in order to increase its effectiveness. An initial needs assessment should be conducted to develop programs which meet villagers' needs. The application of Buddhist doctrine to the community development process is insufficient. The goals of self-help, diligence, and cooperation should be promoted through extension services, and program activities should be expanded to include nonformal education in both agriculture and nonagriculture subjects. Buddhism can not do this. The role of the Buddhist religion is to provide spiritual support to rural Thai villagers, not to conduct development programs. It is more the responsibility of the Thai government, acting through its rural change agents, to improve rural living conditions. The government can do this with the cooperation of the religious sector and other sectors within the community.



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**APPENDIX A.**  
**QUESTIONNAIRE**



Interview Questionnaire used in the "Study of Participation  
in the Virtuous and Prosperous Land (VPL) Program."

May-July 1986

Part 1 General Information

1. Respondent's sex 1. Male 2. Female
2. How old are you? .....years
3. What is the number of your family members?.....member(s)
4. How many of your family members are working?.....member(s)
5. What is your education?
  1. never attend school 2. primary education
  3. secondary education 4. higher than secondary education
6. What is your religion?
  1. Buddhism
  2. Christian/catholic
  3. Islam
7. What is your marital status?
  1. not married
  2. married
  3. widow/divorce
8. What is your social status?
  1. head of village
  2. villagers
9. What is your occupation?
  1. trader
  2. wage earner
  3. farmer
  4. other (please specify).....

10. Do you..

1. have your own land for yourself and for rent?
2. rent land?
3. own some of the land and rent some?
4. not applicable

11. What is your income/year?

1. less than 12,000 baht
2. 12,000 - 21,000 baht
3. more than 21,000 baht

Part 2 Knowledge about the VPL program

12. From whom did you know about the program for the first time?

1. government official
2. head of the village
3. mass media
4. neighbors
5. buddhist monks

13. Have you joined the program?

1. yes
2. no (Go to Q. 15)

14. What are the reasons that you joined the program?

1. voluntary
2. persuasion from governmental official
3. persuasion from head of village
4. persuasion from mass media
5. persuasion from neighbors
6. persuasion from buddhist monks
9. not applicable

15. What are the reasons that make you unable to join the program?

1. don't know that they have a training program
2. not interested
3. other member(s) of the family already did
4. no time
5. not chosen to join the program
9. not applicable

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Knowledge/opinions about the VPL program

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16. The program is not interesting  
1 2 3 4 5
17. The program is only for development of mind  
1 2 3 4 5
18. The program uses Buddhism as guidelines for  
development of mind 5 4 3 2 1
19. The program is aimed at cooperation of farmers to  
develop their own village 5 4 3 2 1
20. You think that the program provided villagers'  
better well-being 5 4 3 2 1
21. The program did not mean to hold back gambling and  
alcoholic drinking in village 1 2 3 4 5
22. The program is very important for rural development  
5 4 3 2 1
23. The program makes you confused  
1 2 3 4 5
24. The program is useful for your village  
5 4 3 2 1
25. The program provided peace for your village  
5 4 3 2 1

Part 3 Participation in the VPL program

26. After the VPL program had been introduced in your  
village, did you participate in the following activities?  
(can choose more than one)
- building fences
  - growing trees
  - building road
  - building shelters
  - building trash baskets and/or thrash burners
  - building water closet

Opinions about participation in the VPL program	SA	A	UND	DA	SDA
27. Taking care of all products/innovations from the program is the responsibility of villagers.	5	4	3	2	1
28. If you can not participate in the activities of the program, you will ask other members of your family to substitute you.	5	4	3	2	1
29. If the village developmental activities need some cash donation, you are willing to do so.	5	4	3	2	1
30. If you can not offer cash donation, you are willing to offer your labor instead.	5	4	3	2	1
31. If your neighbors did not want to participate in the program, it is not your responsibility to persuade them.	1	2	3	4	5
32. Utility has no effect on development.	1	2	3	4	5
33. Development is possible only by the help from the government.	1	2	3	4	5

Part 4 Relations between the VPL program and mind purification

Knowledge and opinions about mind purification					
34. A man of virtue these days is not a modern man.	1	2	3	4	5
35. Smoking/taking intoxicant/liquor are important for social life.	1	2	3	4	5
36. Buying underground lottery and gambling are a normal activity.	1	2	3	4	5
37. Quarrels in a family are a normal activity.	1	2	3	4	5

- |   |   |   |   |   |   |
|---|---|---|---|---|---|
| 38. When you leave your house, you feel insecure about your house and your other properties.                  | 1 | 2 | 3 | 4 | 5 |
| 39. Going to the temple to pray and do other merits are the waste of time.                                    | 1 | 2 | 3 | 4 | 5 |
| 40. The training for the development of mind according to the VPL cause unity and cooperation in the village. | 5 | 4 | 3 | 4 | 1 |
| 41. Cooperation in village activities is not necessary.   | 1 | 2 | 3 | 4 | 5 |
| 42. Discipline is a major factor for mind purification.   | 5 | 4 | 3 | 2 | 1 |

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43. At this moment, have you decreased or given up the following habits?

	not give up	never take	decreased	gave up
--	-------------	------------	-----------	---------

---

- |                        |   |   |   |   |
|------------------------|---|---|---|---|
| 1. cigarette           | 1 | 3 | 4 | 5 |
| 2. intoxicant/liquor   | 1 | 3 | 4 | 5 |
| 3. lottery             | 1 | 3 | 4 | 5 |
| 4. underground lottery | 1 | 3 | 4 | 5 |
| 5. gambling            | 1 | 3 | 4 | 5 |
| 6. drugs abuse         | 1 | 3 | 4 | 5 |

**Part 5 Relations between the VPL program and social development**

- 
- |                             |           |      |          |     |          |
|-----------------------------|-----------|------|----------|-----|----------|
| Level of social development | very high | high | moderate | low | very low |
|-----------------------------|-----------|------|----------|-----|----------|
- 
45. You have clear water to drink throughout the year.
- |   |   |   |   |   |
|---|---|---|---|---|
| 5 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|
46. When ill, it is convenient for you and your family to receive services from governmental health services.
- |   |   |   |   |   |
|---|---|---|---|---|
| 5 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|

47. You (your spouse or other members of the family) practice family planning methods regularly.	5	4	3	2	1
48. You (or other members in the family) are able to receive occupational training whenever needed.	5	4	3	2	1
49. You found it is convenient to access both village, inter-village and village-city roads.	5	4	3	2	1
50. You receive mail late.	1	2	3	4	5
51. You read newspaper from village-newspaper-stand regularly.	5	4	3	2	1
52. When officers from district office call for village meeting, every villagers can render opinions during the meeting.	5	4	3	2	1
53. You voted for members of the house of representatives at the last election.	5	4	3	2	1

**Part 6 Impact of the VPL program on economical development**

**54. What is the source of your funding investment?**

1. your own budget
2. some financial institutions (commercial banks, governmental banks, agricultural cooperatives, and agricultural groups)
3. village investment funding
4. trader and individual debtor
5. borrowing from relatives without interest

**55. What is your mode of selling your products?**

1. sell before harvesting
2. sell after harvesting
3. store and sell when better prices are available

56. What is your major source of income in 1986?

1. farming
2. trading
3. wage earning
4. support from other members of the family who work outside the village

57. Are you having any debt at this moment?

1. yes
2. no (Go to Q 59)

58. what is your kind of debt?

1. short-term loan for investment
2. long-term debt
9. not applicable

59. Do you own any of the following electrical appliances?  
(can choose more than one)

- none
- television
- radio
- refrigerator
- electric fan
- electric rice-cooker

60. do you own any of the following vehicles? (can choose more than one).

- none
- bicycle
- moped
- small-tractor
- pick-up truck

61. Are you now a customer of any bank?

1. yes
2. no (Go to Q 63)

62. What is your status to the bank (s)?

1. borrower
2. depositor
3. depositor and borrower
9. not applicable

63. Are you satisfied with the level of living of your family?

1. very much
2. much
3. moderate
4. little
5. very little

64. When your children finish grade 10, where will you be able to send your children for further education?

1. secondary school in your own district
2. secondary school in your own province
3. secondary school in the capital
4. no children/not applicable



**APPENDIX B.**  
**CORRELATION MATRICES FOR THE PATH MODELS**

Table 9. Zero-Order (Pearson) correlation for respondents' model  
(N=1,084)

	SEX	AGE	EDU	INCOME	PART	PCEP	PARTVIL
SEX	1.00						
AGE	-.15*	1.00					
EDU	-.05**	-.30*	1.00				
INCOME	.00	-.04	.26*	1.00			
PART	-.14*	.06*	-.08*	-.02	1.00		
PCEP	-.05	-.06	.11*	.16*	.10*	1.00	
PARTVIL	-.12*	-.02	.06**	.11*	.18*	.27*	1.00

\*Significant at .01 level or better (1-tailed test).

\*\*Significant at .05 level or better (1-tailed test).

Table 10. Zero-order (Pearson) correlation for participants' model (N=801)

	SEX	AGE	EDU	INCOME	PCEP	PARTVIL
SEX	1.00					
AGE	-.15*	1.00				
EDU	-.05	-.27*	1.00			
INCOME	-.01	.01	.22*	1.00		
PCEP	-.06	-.03	.11*	.17*	1.00	
PARTVIL	-.09*	-.02	.09*	.16*	.28*	1.00

\*Significant at .01 level or better (1-tailed test).

Table 11. Zero-order (Pearson) correlation for non-participants' model (N=283)

	SEX	AGE	EDU	INCOME	PCEP	PARTVIL
SEX	1.00					
AGE	-.11**	1.00				
EDU	-.11**	-.35*	1.00			
INCOME	.04	-.14*	.37*	1.00		
PCEP	.03	-.14*	.09**	.14**	1.00	
PARTVIL	-.11**	-.06	.02	.01	.18*	1.00

\*Significant at .01 level or better (1-tailed test).

\*\*Significant at .05 level or better (1-tailed test).